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ABSTRACT

This paper examines the economic push factors encouraging migration from the Caribbean Basin to the United States, as part of an assessment of the effectiveness of the Immigration Reform and Control Act of 1986. The basic assumption is that much of the migration is motivated by a desire to improve economic circumstances, and that the nonavailability of jobs in the native country is the key to the strength of this motivation. The growing imbalance between labor supply and labor demand in the Caribbean Basin is examined, utilizing alternative assumptions about how rapidly labor demand is likely to increase in the future. The implications of rising unemployment for migratory pressure are then discussed. The jobs that would have to be created, in addition to those expected to be generated by the continuation of present policies in order to achieve a variety of postulated job targets, as well as the projected costs of creating these additional jobs, are estimated. The major conclusion is that long-term solutions to the problem of rising joblessness in the Caribbean must focus on continued fertility reduction and on accelerated efforts towards economic development. Statistical data are included on 18 graphs, 3 tables, and a map. The appendix consists of 15 tables of labor projections and cost estimates. A list of 48 references and a 25-item bibliography of related titles on the impact of immigration in California are also included. (FMW)

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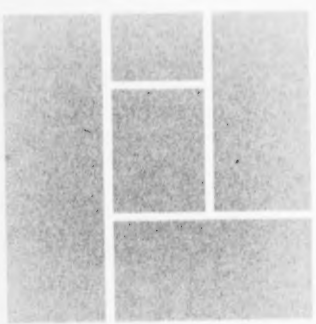
Thomas J. Espenshade



THE URBAN INSTITUTE

Project Report

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Projected Imbalances Between Labor Supply and Labor Demand in the Caribbean Basin: Implications for Future Migration to the United States

by

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The Urban Institute
2100 M Street, N.W.
Washington, D.C. 20037

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FOREWORD

Issues concerning the level and composition of immigration to the United States have assumed prominent positions on the agendas of many policymakers. Perhaps nowhere are immigration's effects more keenly felt than in California, where one-quarter of all foreign-born persons in the United States currently reside.

This Policy Discussion Paper series is aimed at improving the quality of the policy-making process through a broad distribution of research findings on the consequences of immigration to California. These dissemination activities are part of The Urban Institute's larger project, Study of the Impacts of Immigration in California, funded by the Weingart Foundation, the Atlantic Richfield Foundation, the Ahmanson Foundation, and the Times Mirror Foundation. Important policy issues being addressed include (a) economic and fiscal issues associated with immigration, (b) the character and tempo of assimilation processes, and (c) the impact on California of proposals for immigration reform. All major immigrant groups to California--not just Mexicans--are being included, as are the comparative effects in northern as well as in southern California.

The Urban Institute's objective is to make a positive contribution to the policy process. It is committed to getting its work into the hands of people who can use it and rely upon it to make judgments of their own on future policy directions. Related titles are listed at the end of this paper.

Michael J. White
Director, Study of the Impacts
of Immigration in California

PROJECTED IMBALANCES BETWEEN LABOR SUPPLY AND LABOR DEMAND IN THE CARIBBEAN BASIN: IMPLICATIONS FOR FUTURE MIGRATION TO THE UNITED STATES

Executive Summary

As a way of beginning to assess the likely effectiveness of the Immigration Reform and Control Act of 1986, this paper examines push factors underlying migration northward from the Caribbean Basin to the United States. It assumes that much of this migration is motivated by a desire to improve one's economic circumstances and that a key to the strength of this motivation is the availability of jobs in one's own country. The growing imbalance between labor supply and labor demand in the Caribbean Basin is examined by utilizing alternative assumptions about how rapidly labor demand is likely to increase in the future. The implications of rising unemployment for migratory pressures are then discussed. The number of additional jobs that would have to be created, beyond those that might be generated by the continuation of present policies, to achieve a variety of postulated job targets as well as the projected cost of creating these additional jobs are also estimated.

To prevent the number of unemployed persons from rising above their 1980 levels in any of the four regions of the Caribbean Basin between 1980 and 2010, 11 million additional jobs would need to be created at a total cost (in 1982 dollars) of more than $400 billion. A less stringent policy target is to aim to prevent employment rates from rising more than 50 percent above their 1980 levels in any of the regions of the Caribbean Basin between 1980 and 2010. This objective necessitates nearly 4 million additional jobs at a total estimated cost of almost $120 billion. An intermediate scenario that tries to establish a ceiling on unemployment rates at their 1980 levels would require more than 7 million extra jobs and cost an added $270 billion. Whether any of these projected levels of needed investment can be achieved will influence the pattern and strength of migration to the United States in the next two decades.

> Unemployment and underemployment are spreading--an overriding social and economic problem in [El Salvador, Honduras, Nicaragua, Guatemala, and Costa Rica]. The high rate of population growth magnifies these problems. Job opportunities are vanishing, even as a quarter of a million young people are entering Central America's job markets each year. In a region where half of the population is below the age of 20, the combination of youth and massive unemployment is a problem of awesome—and explosive--dimensions.
>
> The Kissinger Commission (1984, p. 385)

INTRODUCTION AND OVERVIEW

By virtue of its high rates of population growth and close physical proximity to the United States, the Caribbean Basin holds a place of special significance to this country and to U.S. foreign policy.[1] Indeed, as pointedly demonstrated by the events surrounding the civil strife in Nicaragua and El Salvador, the concern over the servicing and repayment of Latin American foreign debt, and the large international movements of refugees and undocumented migrants throughout the western hemisphere, the United States is not immune to the consequences of important economic, social, and political developments in Mexico, Central America, and other parts of the region.[2] Interdependence between the United States and Latin America seems certain to grow in coming years.

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[1]For the purposes of this paper, the Caribbean Basin is divided into four regions: countries in the Caribbean Islands, the northern tier of South America (Colombia, Venezuela, Guyana, and Suriname), Central America, and Mexico (see Figure 1). Patterson (1987) calls this the circum-Caribbean area.

[2]The strategic implications for the United States of rapid population growth in the Caribbean and Middle and South America have been examined in the collection edited by Saunders (1986). See Bach (1985) for a review of demographic linkages between the United States and this region. Patterson (1987) points out that these linkages have deep historical roots, dating back to well before the Spanish-American War, and involve complex flows of people and ideas.

FIGURE 1. THE CARIBBEAN BASIN

The Caribbean Basin's estimated population of 164 million in 1980 was roughly three-fourths as large as the U.S. population. But according to middle-series projections prepared by the United Nations (1986) and the U.S. Bureau of the Census (1984), the Caribbean Basin is expected to draw even with the United States at about 275 million people in less than 20 years. These same sources project a population for the Caribbean Basin in the year 2025 that is nearly 25 percent larger than the U.S. population (372 versus 301 million). Over the same period the labor force in the Caribbean Basin is expected nearly to triple in size, growing from 53 million in 1980 to a projected total of 150 million by 2025. Signs of strain have already started to appear. For example, Mexico led the list of the world's countries sending both legal and undocumented migrants to the United States in the early 1980s, and other Caribbean Basin nations figured prominently in the top 10.

Partly in response to these demographic developments, the U.S. Congress passed the Immigration Reform and Control Act of 1986 (IRCA) in October 1986, and President Reagan signed the bill into law on November 6, 1986. A major objective of this legislation, which represents the most sweeping revision of U.S. immigration laws since 1965, is to control the flow of undocumented migration into the United States. One of the principal means of enforcement is through employer sanctions--a system of fines and other penalties on employers who knowingly hire undocumented workers.[3]

Whether IRCA achieves the aims its supporters intended will depend upon a number of domestic considerations, including U.S. employers' needs for

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[3]The U.S. Immigration and Naturalization Service is also being provided with additional funding to augment its enforcement activities along the U.S.-Mexico border.

low-skill, low-wage labor and their willingness to risk fines and jail sentences for hiring illegal workers, the shortfall among native workers as members of the baby bust generation begin entering the labor market, and the extent to which business perceives that the Immigration and Naturalization Service (INS) is determined to enforce the new law.[4] In addition, however, the success of IRCA will depend upon international factors including the strength of external demand for illegal entry into the United States, which is in turn largely a function of the imbalance between labor supply and job availabilities in the Caribbean Basin.[5] It is likely that IRCA will have to contend with mounting pressure on U.S. labor markets from outside the country unless major and simultaneous efforts are undertaken to accelerate the process of job creation in those countries of Latin America closest to the United States.

As a first step in assessing the likely effectiveness of IRCA, this paper examines push factors underlying migration northward from the Caribbean Basin to the United States. It assumes that much of this migration is motivated by a desire to improve one's economic circumstances and that keys to the strength of this motivation are the availability of jobs and associated rates of pay in one's own country compared with opportunities in the United States (Portes,

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[4]Wachter (1980) developed a labor supply forecast for the U.S. 1980's labor market, focusing on the effects of recent low fertility, and then compared that forecast with a Bureau of Labor Statistics projection of employment demand for the current decade. Wachter predicted a relative shortage of unskilled workers in the 1980s and suggested that increasing the flow of immigrants would help to relieve some of the bottlenecks.

[5]Interrelations among population growth, labor supply, and economic policies for Mexico between 1940 and 1980 have been studied by Alba (1987). He also considers the prospects for generating an economic trajectory consistent with future employment needs in the country.

1982; Bradshaw and Frisbie, 1983). Rising numbers and rates of unemployed dampen the chances of finding satisfactory domestic employment and cause people to look elsewhere for work. The next section of this paper examines the growing imbalance between labor supply and labor demand in the Caribbean Basin by utilizing alternative assumptions about how rapidly labor demand is likely to increase in the future. The implications of rising unemployment for migratory pressures are then discussed. Following that we examine how many additional jobs would have to be created, beyond those that might be generated by the continuation of present policies, to achieve a variety of postulated policy targets. The projected cost of creating these additional jobs is also estimated.

Our analysis shows that, to prevent the number of unemployed persons from rising above their 1980 levels in any of the four regions of the Caribbean Basin between 1980 and 2010, 11 million additional jobs would need to be created at a total cost (in 1982 dollars) of more than $400 billion. A less stringent policy target is to aim to prevent unemployment rates from rising more than 50 percent above their 1980 levels in any of the regions of the Caribbean Basin between 1980 and 2010. This objective necessitates nearly 4 million additional jobs at a total estimated cost of almost $120 billion. An intermediate scenario that tries to maintain a ceiling on unemployment rates at their 1980 levels would require more than 7 million extra jobs and cost an added $270 billion. Whether any of these projected levels of needed investment can be achieved will influence the pattern and strength of legal and undocumented migration to the United States in the next two decades.

LABOR SUPPLY AND LABOR DEMAND PROJECTIONS FOR THE CARIBBEAN BASIN

Let us begin this section by briefly describing population trends in the Caribbean Basin because population growth is a major determinant of subsequent growth in the labor force.[6] Between 1950 and 1980, population in the Caribbean Basin grew from 71 million to 164 million, an increase of about 130 percent in just 30 years. A further increment of roughly the same relative magnitude is expected during the next 45 years, with the population reaching a total projected size of 372 million by the year 2025. Average annual rates of population growth for the Caribbean Basin fluctuated between 2.6 and 2.9 percent in the three decades separating 1950 and 1980, with rates in individual regions reaching as high as 3.3 percent in the Southern Rim (Colombia, Venezuela, Guyana, and Suriname) during the 1950s and 3.2 percent in Mexico in the 1960s. It is commonly known that such high rates of population growth were due to unprecedented declines in death rates that began before World War II and accelerated between the war's end and the early 1960s, without a corresponding reduction in birth rates.[7]

In making its medium-variant projections for the Caribbean Basin population, the United Nations (1986) assumed that birth rates throughout the region will gradually fall, thereby lowering future rates of population growth. Average annual growth rates for the entire Caribbean Basin are expected to drop below 2.0 percent in the first decade of the next century and continue declining to 1.2 percent by 2025. Projected rates are lowest for the

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[6]Regarding the determinants of labor force growth in Latin America, Gendell (1986) found that population growth had been and was anticipated to continue being much more important than changes in labor force participation rates. Indeed, he concluded that population growth was virtually the sole determinant.

[7]A general discussion of trends in births and deaths in Latin America is contained in Merrick (1986).

Caribbean Islands and consistently highest in Central America. As a result, the population in Central America increases as a share of the total, rising from 13 percent in 1950 to 18 percent by 2025. Slower growth in the Caribbean Islands is expected to reduce its share from 24 percent in 1950 to 16 percent by 2025. Mexico and the Southern Rim had the largest populations in the region in 1980, with 69 and 42 million people, respectively. By the year 2025 their respective shares of the total are projected to reach 41 and 25 percent, just slightly ahead of their 1950 levels.

Labor Supply: 1950-2020

The labor force is an important channel by which population trends affect the economy, because changes in the size and composition of the labor force are key factors in determining rates of economic growth. At the same time, increases in the size of the labor force that outstrip the capacity of the economy to create useful employment may have adverse demographic as well as other consequences. People in rural areas who are unable to find employment may migrate to nearby cities, adding to already overcrowded conditions and putting additional demands on public services.[8] Insufficient numbers of jobs in either rural or in urban areas may in turn create pressures for international migration. Government leaders are keenly aware that high levels of unemployment and underemployment can lead to political instability.

In this paper, the terms "labor force" and "labor supply" are synonymous with the economically active population, defined to comprise all employed and unemployed persons, including those seeking work for the first time (International Labour Office, 1986, p. ix). The employed population may

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[8]A discussion of the factors influencing rates of urban growth in Latin America, projections of future rates of growth in urban and rural areas, and suggested policy responses to the pressures of urban concentration is contained in Fox (1986) and Jordon (1986).

include some people who are underemployed, especially in low-income countries. Persons who do not hold jobs and who are either unable or unwilling to work are considered to be out of the labor force. The size of any country's labor force depends both on the age-sex composition of its population in the working ages and on labor force participation rates, that is, on the proportions of persons in selected age-sex categories who are in the labor force. As a result, trends in population and in labor force growth are often closely related, but usually they are not identical. Increases in labor force participation rates, for example, lead to a larger labor force independently of population growth. In addition, if population growth rates accelerate because of an increase in birth rates or a decline in infant and childhood mortality, the impact on the labor force of these larger cohorts of young people will not be felt for another 10 or 15 years.[9]

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[9]Mexico's experience illustrates both the independent effects of changes in labor force participation rates and the delayed impact of altered birth cohort sizes on labor force growth. Mexico's overall rate of population growth reached a peak following the Second World War of 3.2 percent per annum during the 1960s. Owing in large part to the vigorous sponsorship of a national family planning program by the Mexican government in the 1970s, Mexico's total fertility rate fell from 6.7 in 1970 to 4.1 in 1980 (Alba and Potter, 1986; Stycos, 1986). This decline had the effect of lowering the overall rate of population growth during the 1970s to 3.05 percent per year. By 1984 the annual growth rate had dropped to 2.2 percent (Alba and Potter, 1986). Nevertheless, the rate of growth of population in the labor force ages (15-64) moved ahead--from an average annual rate of 3.0 percent during the 1960s to 3.4 percent in the 1970s--primarily because the larger youth cohorts, produced by an accelerating population growth rate during the 1950s and early 1960s, were now entering the labor force. In this connection, Alba (1987) argues that the early success of Mexico's economic policies in absorbing the labor supply was undermined once the delayed impact of the rapid population growth was more fully felt on the labor markets and some of the easy labor absorption potential of the import substitution strategy began to be exhausted. Compounding the growth of population in the labor force ages was a sharp increase in labor force participation rates. In the age range from 25 to 49, these rates (expressed as a percent) increased from roughly the mid 50s in 1970 to the low-to-mid 60s by 1980, boosting the average annual rate of growth of Mexico's labor force from 2.7 percent during the 1960s to 4.3 percent in the 1970s (International Labour Office, 1986).

Labor force trends discussed in this section are based on estimates and projections prepared by the International Labour Office (ILO) (1986) of the economically active population for the Caribbean Basin. Projections of labor supply are consistent with the medium-variant projections of total population as assessed in 1984 by the United Nations (1986). The ILO also issues labor force projections based on the high and low variants of the U.N. population projections. These alternatives are not discussed here, not only for reasons of economy, but also because the differences between the figures as derived from the two variants are small in most cases and generally less than the percentage of error contained in the projections models themselves (International Labour Office, 1986). Labor force participation rates, which are applied to the medium-variant U.N. population projections to yield projections of the economically active population, are produced from regression equations that take account of historical trends in rates of change in the economically active population ratios.

The resulting labor supply projections should not be confused with forecasts. That is, these projections are based on assumptions about future trends in population and in labor force participation rates, and these assumptions may be disproved by subsequent experience. Nevertheless, because the ILO labor force projections are based on a standard projection methodology which employs uniform concepts, methods, and classification schemes and which, with a few exceptions, has been applied uniformly to all countries, areas, and territories, we may consider them to be reliable for the purposes of our analysis here.

Trends in labor supply for each of the four major regions of the Caribbean Basin are shown in Figure 2.[10] In 1950, when total labor supply in the Caribbean Basin numbered just 25 million persons, no region registered a labor force larger than 9 million. By 1980 the regions' combined labor force had reached 53 million--a growth of 117 percent in three decades--and Mexico's economically active population (22 million) was nearly as large as that for the entire Caribbean Basin in 1950. Labor supply throughout the four regions is projected to total 93 million by the year 2000 and to reach 140 million by 2020. At these expected levels, the Caribbean Basin's labor force will grow by 40 million persons between 1980 and 2000 and by another 4 million between 2000 and 2020. Much of this projected increase will occur in Mexico--roughly 44 percent over the entire 40-year period. As indicated in Figure 2, the gap between the size of Mexico's economically active population and that in the next largest region steadily widens over time.[11]

Labor supply expands in all four regions of the Caribbean Basin between 1950 and 2020, but there are significant differences in rates of growth among regions. These differentials are reflected in changes in each region's labor force as a share of the total labor force (see Figure 3). Mexico has the largest regional labor force and is expected to increase its share of the

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[10]Throughout this paper much of the text's main story is illustrated graphically. Detailed appendix tables are included for readers interested in the specific numbers.

[11]Bloom and Freeman (1986) demonstrate that, despite unprecedented rates of population growth, developing countries were generally able to "absorb" the new labor supply at increased levels of productivity and with a shift toward more productive employment in the period between 1960 and 1980. Looking to the future, they stress that "the economies of the less developed countries are about to face perhaps the greatest challenge in their histories: generating a sufficient number of jobs at reasonable wages to 'absorb' their rapidly growing populations into productive employment" (p. 381).

FIGURE 2. LABOR SUPPLY IN THE CARIBBEAN BASIN: 1950 - 2020

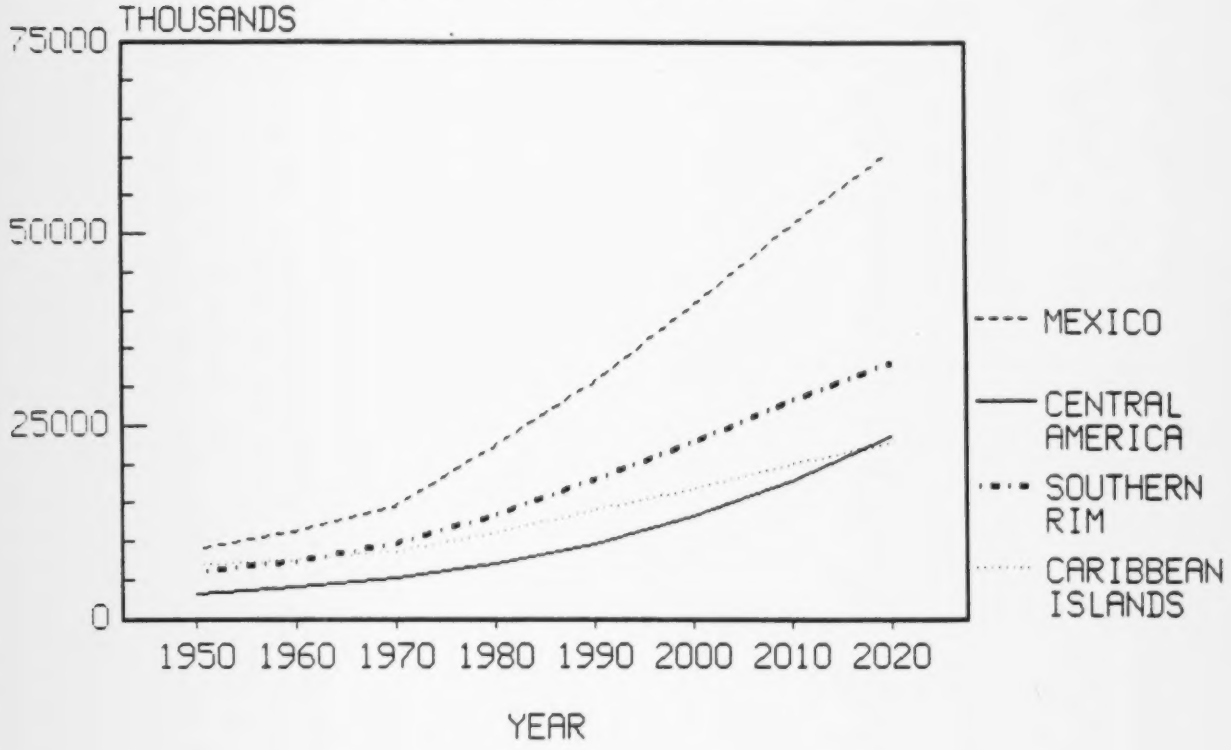
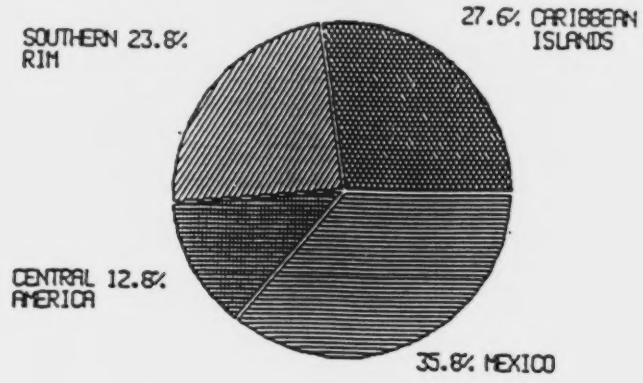
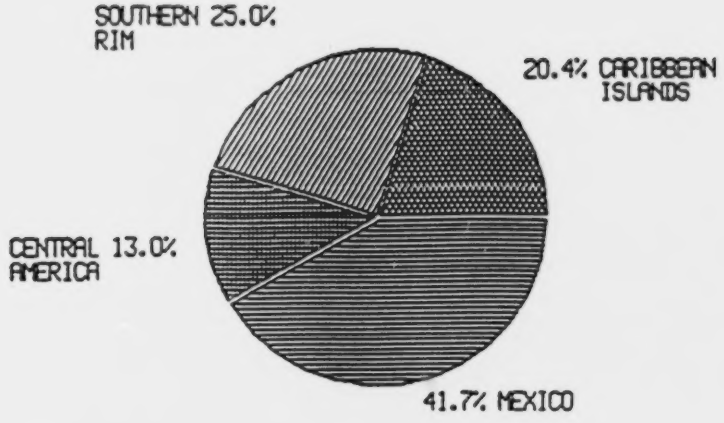


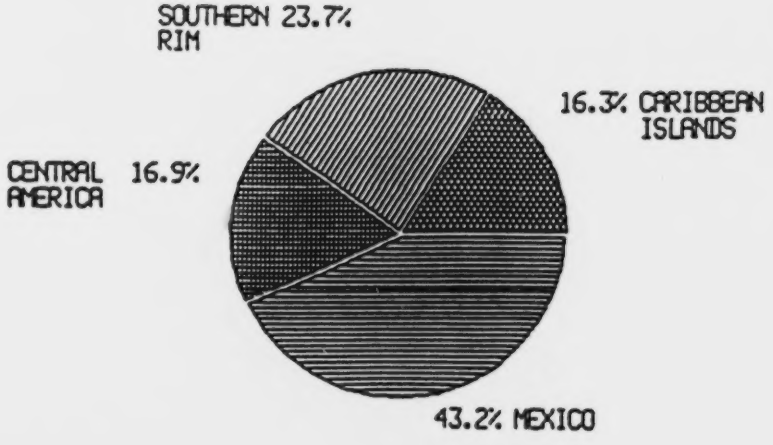
FIGURE 3. REGIONAL SHARES OF CARIBBEAN BASIN LABOR FORCE



1950



1980

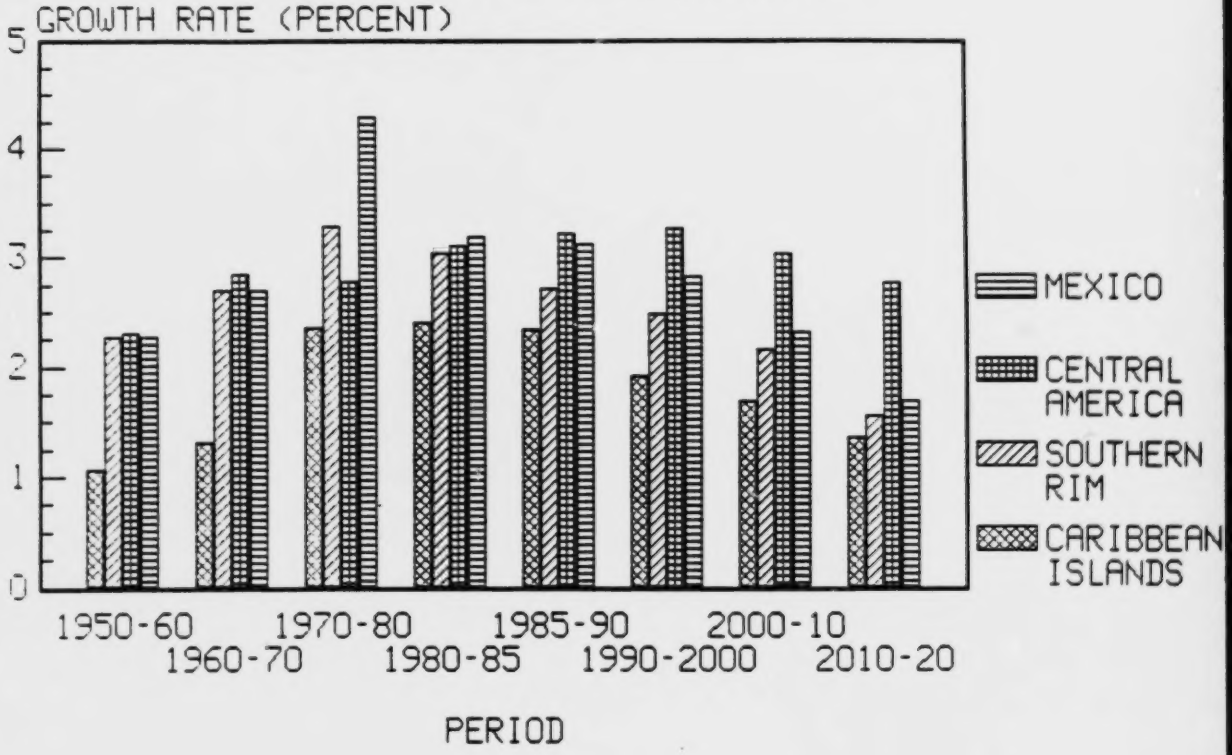


2020

total from 36 percent in 1950 to 43 percent by the year 2020. Owing to its slower rate of population growth, the Caribbean Islands are expected to lose share relative to others, declining from 28 percent of the total in 1950 to 16 percent by 2020. Central America historically has had the Caribbean Basin's smallest labor force. In 1950, its economically active population was only half as large as the labor force in the next smallest region (the Southern Rim). By the year 2020, Central America is expected to surpass the Islands' labor force and to rise to 17 percent of the total, up from 13 percent in 1950. The Southern Rim exhibits little change throughout the period; its labor supply never deviates far from one-quarter of the total.

Average annual rates of actual labor force growth for the period 1950-1980 and projected rates for 1980-2020 are shown in Figure 4. The typical pattern is one of accelerating labor force growth up to the 1970s or early 1980s followed by a leveling off or a gradual decline in growth rates. This pattern reflects an earlier peaking in each region's overall rate of population growth combined with secular increases in labor force participation rates. In the future, the rise in participation rates is projected to slow and be more than offset by declines in the rate of growth of population in the economically active ages. For the Caribbean Basin as a whole, the average rate of labor supply growth rose from 2.0 percent per annum in the 1950s to a peak of 3.4 percent during the 1970s. Gradual declines are projected thereafter with the annual rate expected to fall to 2.9 percent in the late 1980s and eventually to 1.8 percent by 2010-2020. Even though the rate of growth is falling, however, it is being applied to an expanding base. Consequently, the projected absolute number of persons being added to the Caribbean Basin's labor supply will continue to mount until well toward the end of the projection period.

FIGURE 4. AVERAGE ANNUAL GROWTH RATES OF THE ECONOMICALLY ACTIVE POPULATION



Labor Demand: 1980-2010

The previous section presented projections of labor supply. Just because people want jobs, however, does not automatically mean that jobs will be available for them. It is important, therefore, to examine projections of the future demand for workers (or job opportunities) and to compare this demand with projections of labor supply.

Published projections of labor demand are much rarer than projections of labor supply. Indeed, it has been impossible to locate projections of labor demand for the complete set of Caribbean Basin countries considered here. Part of the difficulty is that projecting labor demand is inherently more problematic than projecting labor supply. In the latter case, persons who will be entering the labor force over the next 15 or 20 years are already alive, and one can ascertain their numbers with relative reliability. In addition, changes in the size and composition of a population--changes that drive changes in the size and composition of the labor force--occur relatively slowly, especially when compared with the speed of many economic changes. Such economic indicators as unemployment rates, interest rates, growth rates in Gross National Product, and rates of inflation can change quickly. A doubling or halving in the value of any of these within the space of two or three years would not be uncommon. Because the demand for labor hinges on the performance of the overall economy and because this performance is especially difficult to anticipate, researchers have typically been hesitant to make projections of labor demand.

One assessment of potential labor demand in Latin America has been provided by Gendell (1986) who compares growth rates implied by two models that contain assumptions about the region's ability to absorb its future labor

supply. The first model, developed by PREALC (1976), projects the extent of labor utilization in Latin America between 1970 and 2000. Gross domestic product (GDP) is assumed to expand at an average annual rate of 6.5 percent, total employment grows at 2.7 percent annually, while open unemployment nearly doubles. The second projection, prepared by the United Nations Industrial Development Organization (1982), constructs a scenario in which developing countries produce 25 percent of world manufacturing by the year 2000 (Latin America accounts for 13 percent of this total). Given this assumption, the implied average annual growth in labor demand from 1975 to 2000 is 3.2 percent, if Latin America can achieve an average annual rate of economic growth of 8.0 percent. Based on historical estimates of economic growth rates in Latin America and considering the poor performances of the economies of many Latin American countries during the early 1980s, Gendell concludes that the rate of economic growth most likely to occur in Latin America will be even lower than the rate predicted by the PREALC model. As a result, labor demand is likely to grow by an amount less than 2.7 percent per year.

In the absence of published data, we have prepared our own projections of labor demand for each of the Caribbean Basin regions. Three separate projections are used, partly to emphasize that these are not forecasts of the future but rather projections based on particular sets of assumptions. In each projection, assumptions about how quickly the economy will be able to generate jobs are based on the historical record. The low labor demand scenario selects the smallest decennial labor force growth rate between 1950 and 1980 in each of the four regions and assumes that total job opportunities will grow at this rate between 1980 and 2010. The medium and high growth scenarios use the intermediate and the largest decennial labor force growth

rates, respectively, from 1950 to 1980 and assume that labor demand will grow exponentially at these rates through 2010. The actual growth rates used to project labor demand in each region under the high, medium, and low growth scenarios are contained in Table 1. The Caribbean Islands show the slowest employment growth of any region in all three scenarios. Moreover, under the medium growth and low growth paths, the remaining three regions exhibit roughly comparable growth rates--2.7 percent per annum under medium growth and 2.3 percent under low growth.

To generate the projections, the exponential growth rates in Table 1 were applied to baseline labor demand figures for 1980. These baseline data were obtained by first estimating 1980 rates of unemployment for each of the four Caribbean Basin areas. Averages of 1980 unemployment rates for selected countries within each region provided the basis for the regional estimates (International Labour Office, 1983).[12] These rates ranged from 7 percent in

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[12]By ILO criteria, persons who are underemployed are more likely to be included with the employed than with the unemployed (International Labour Office, 1983, chapters II and III). Underemployment in Latin America is widespread and frequently concentrated in the informal sectors of low-income economies (Merrick, 1986). As a result, rates of labor underutilization are not fully captured by rates of open unemployment. Gendell (1986), in fact, argues that for Latin America "underemployment is a more important form of labor underutilization than open unemployment" (p. 61). He reports that 42 percent of the labor force were in sectors of low labor utilization in 1980. Our subsequent projections of unemployment rates exclude a measure of underemployment or "equivalent unemployment." Gregory (1986) presents a discussion of the difficulties of developing a meaningful measure of underemployment that is not subject to factors unrelated to labor market conditions. Furthermore, regarding Mexico, Gregory notes that "the large measure of underemployment will not represent an accurate measure of the idle labor resources available for immediate employment in newly created vacancies" (p. 275). To the extent that low wages rather than joblessness per se constitutes the driving force behind undocumented immigration to the United States, focusing on the potential for rising unemployment in the Caribbean Basin can possibly result in understating the power of push factors motivating migration out of the region.

Table 1

Annual Percentage Growth Rates
Used to Project Labor Demand: 1980-2010

Scenario	Region			
	Caribbean Islands	Southern Rim	Central America	Mexico
High Growth	2.36[a]	3.28[a]	2.84[b]	4.29[a]
Medium Growth	1.31[b]	2.69[b]	2.77[a]	2.70[b]
Low Growth	1.07[c]	2.27[c]	2.30[c]	2.27[c]

a. Based on 1970-1980.

b. Based on 1960-1970.

c. Based on 1950-1960.

Mexico to 15 percent in the Caribbean Islands, with an average for the entire Caribbean Basin of 9 percent. Next, the volume of unemployment within each region in 1980 was calculated by multiplying the unemployment rates by 1980 estimates of labor supply, and the resulting levels of unemployment were subtracted from total labor supply to produce estimates of regional employment levels. Finally, it was assumed that levels of employment in 1980 are a satisfactory measure of baseline labor demand. Estimated total labor demand in 1980 was 49 million in the four regions combined, compared with an estimated total labor supply of 53 million.[13]

Projections of future labor demand under the low, medium, and high growth scenarios are illustrated in Figures 5, 6, and 7, respectively. Under the low growth projection, job availabilities throughout the entire Caribbean Basin area are expected to increase by 86 percent between 1980 and 2010. Projected labor demand is expected to rise from 49 million to 91 million, or at an average annual rate of 2.1 percent. With the exception of the Islands where projected growth is slowest, labor demand is expected to double in each region of the Caribbean Basin. In Mexico, for example, labor demand is expected to jump from 21 million in 1980 to 41 million by the year 2010.

Similar regional patterns of labor demand, albeit on a magnified scale, are evident in the medium growth scenario. Total labor demand throughout the Caribbean Basin is expected to rise to 103 million by 2010, an increase of 111 percent over the 1980 total. Projected labor demand increases by a half in the Caribbean Islands and by approximately 125 percent in each of the three

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[13]Baseline total labor demand in each region in 1980 was as follows: 9.3 million in the Caribbean Islands, 12.3 million in the Southern Rim, 6.4 million in Central America, and 20.7 million in Mexico. Additional detail is included in the appendix tables.

FIGURE 5. PROJECTED LABOR DEMAND: LOW GROWTH

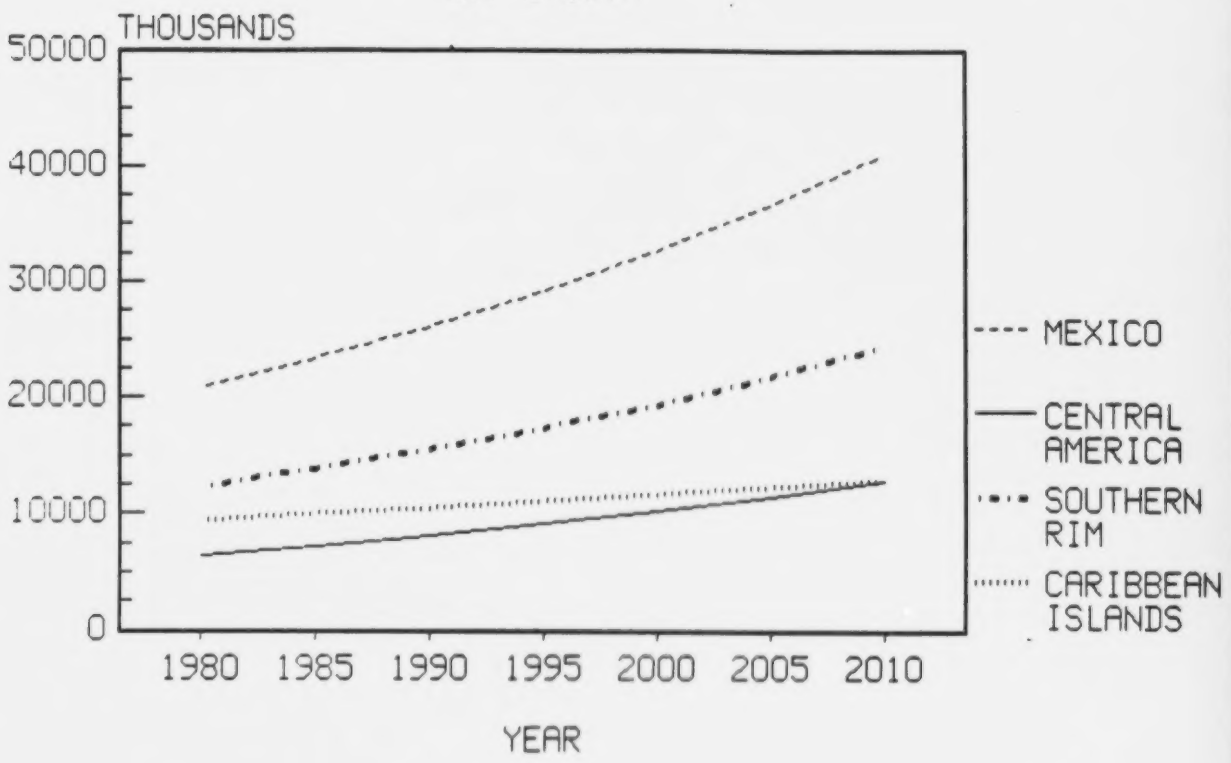


FIGURE 6. PROJECTED LABOR DEMAND
MEDIUM GROWTH

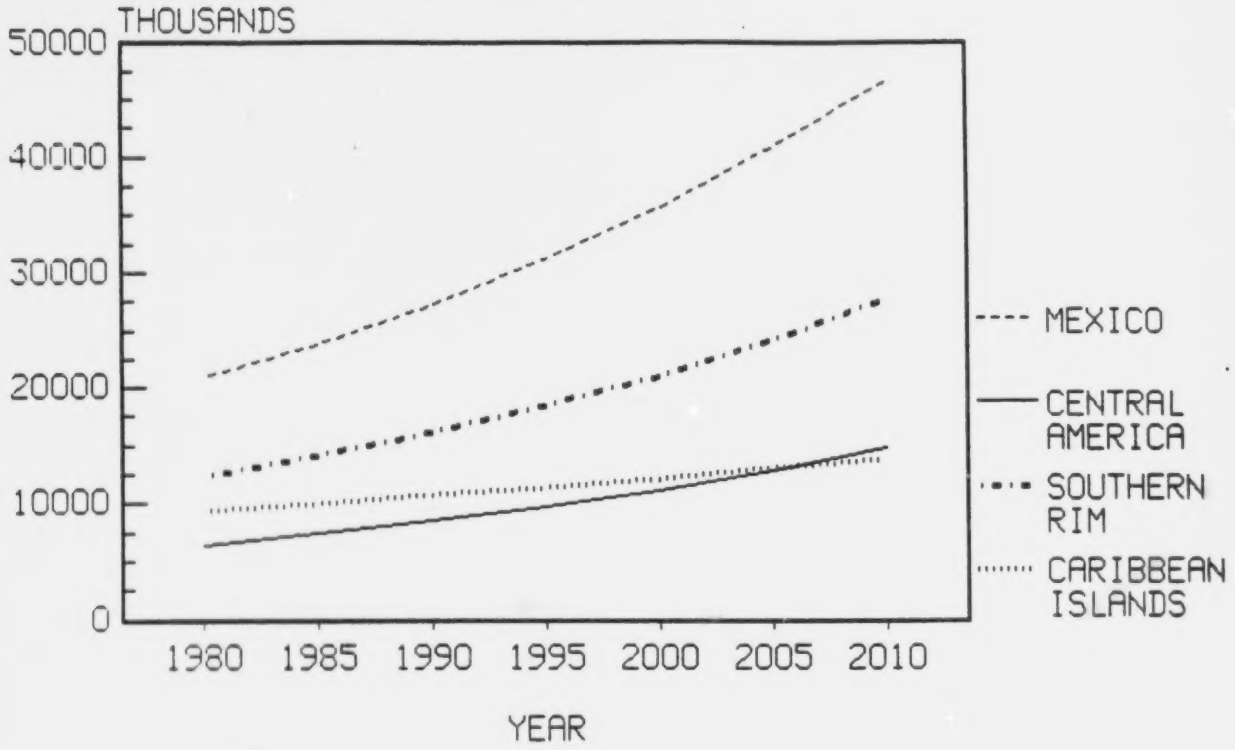
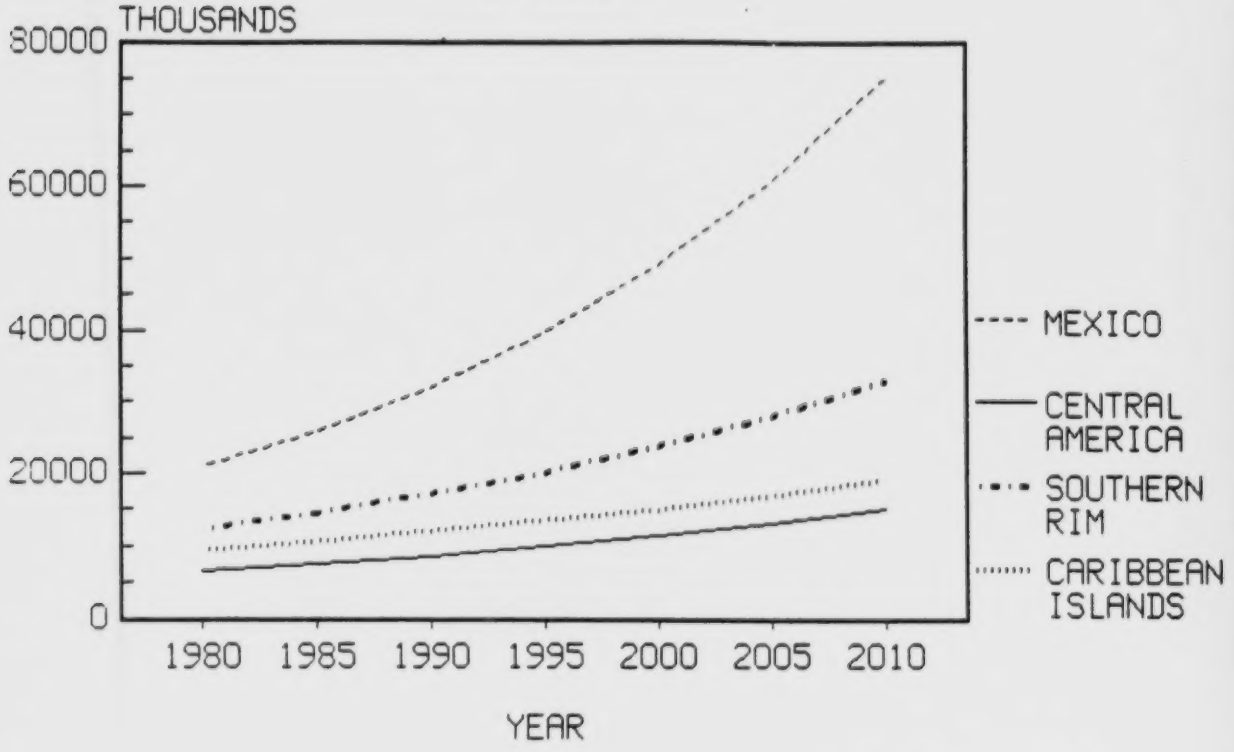


FIGURE 7. PROJECTED LABOR DEMAND: HIGH GROWTH



remaining regions. Job availabilities in Central America are expected to draw even with labor demand in the Caribbean Islands in the year 2005 and then to surpass it by 2010.

The increase in projected labor demand is especially rapid under the high growth scenario, propelled in large measure by the extraordinary increases in Mexico. For the entire Basin, job availabilities are expected to grow at an average annual rate of 3.6 percent, and labor demand is projected nearly to triple from 49 million in 1980 to 142 million by 2010. Projected labor demand in Mexico in 2010 is 3.6 times greater than in 1980 (75 versus 21 million). And, for the first time, projected labor demand doubles between 1980 and 2010 in the Caribbean Islands.

Several comments on the labor demand numbers are warranted. First, because the projections are based on labor force growth rates that were actually experienced by each of the regions between 1950 and 1980, they might be thought of as reflecting in some sense the continuation of present policies. That is, the projections in Figures 5, 6, and 7 might be interpreted as the number of jobs the respective economies would produce (under the specified assumptions) if no extra efforts to create employment are undertaken, over and above those already being implemented. Second, the assumption that job availabilities can be expected to grow exponentially may be satisfactory in the short run, but it becomes less tenable when extended over a 30-year period, especially when growth rates as high as those assumed in the high growth scenario are employed. Furthermore, the use of constant growth rates to project labor demand is somewhat at odds with the data in Figure 4, which shows projected future declines in rates of labor force growth. Building similar declines into projected growth rates of labor demand may have been preferable, although it is difficult to defend the choice of a

particular path of decline against the charge of being highly arbitrary and bearing little relation to the historical record.[14]

Third, because the gap between the high growth and low growth projections exceeds 50 million jobs by the year 2010, it is of no little consequence to potential users of these data to know which labor demand scenario is most likely to occur. The actual economic performance of the major Caribbean Basin countries since 1980 does not leave much room for optimism. Table 2 compares average annual rates of growth since 1950 in real gross domestic product (roughly equivalent to the total annual volume of all goods and services produced by the economy when measured in constant prices) for the eight largest countries in the Caribbean Basin. For each of these countries, 1980 marks a sharp turning point. Prior to that date economic growth was robust, often ranging between 4 and 7 percent per year. After 1980, however, economic growth slowed and actually turned negative for many countries.

This downturn in economic performance has also exerted a depressing effect on labor demand. According to the International Labour Office (1987), the world labor situation has continued to deteriorate since the early 1980s. In half of the more than 40 developing countries the ILO surveyed, real wages have fallen by more than one percent annually over the past 15 years, and in Latin America a majority of workers have suffered a drop in real income of as much as 40 percent. In Mexico, for example, real agricultural wages, which rose enormously between 1965 and 1980, are now back to their 1965 levels. In addition, regular wage employment is also stagnant or contracting,

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[14]It simplifies the analysis to assume that trends in labor demand are independent of changes in labor supply. A more complicated model would recognize that population growth and economic growth are dynamically related to one another.

Table 2

Average Annual Percentage Growth Rates of Real Gross Domestic Product, Largest Countries in the Caribbean Basin: 1950-1986

Country	Estimated Population Size (millions)	Growth Rate of Real GDP			
		1950-1960	1960-1970	1970-1980	1980-Latest Available Year
Mexico[a]	78.5	5.9	6.8	6.4	1.6
Colombia[b]	28.2	4.5	5.3	5.4	2.6
Venezuela[c]	16.9	6.8	5.9	4.0	-1.3
Cuba[d]	10.1	-	-	-	-
Guatemala[e]	7.7	3.7	5.4	5.5	-0.9
Haiti[f]	5.2	1.5	0.9	4.6	-0.7
El Salvador[g]	5.0	2.4	5.1	3.2	-1.4
Honduras[h]	4.4	3.0	4.8	4.5	1.3

Sources: Population estimates are from United Nations, World Population Prospects: Estimates and Projections as Assessed in 1984, Department of International Economic and Social Affairs, Population Studies, No. 98, New York, 1986. Gross domestic product data are contained in International Monetary Fund, International Financial Statistics Yearbook, volume 40, Washington, D.C., 1987.

Notes:	Date of population estimate	Latest year for GDP data
a.	30 VI 1985	1985
b.	1 VII 1984	1986
c.	1 VII 1984	1985
d.	28 II 1985	no data available
e.	30 VI 1984	1986
f.	30 VI 1984	1986
g.	1 VII 1982	1986
h.	30 VI 1985	1986

forcing an increasing number of people into self-employment or casual wage work. In light of these considerations, the labor demand projections contained in the high growth scenario appear excessively optimistic, and a more realistic outcome might be expected to lie somewhere between the low growth and medium growth alternatives.

The Gap Between Job Seekers and Job Opportunities

A major concern of economists, planners, and policy makers involved in the Caribbean Basin is that population growth rates have been so high that most countries seem to have very little chance of providing sufficient jobs to all those who are about to enter the labor force. Even where population growth rates have declined (as in Mexico) because of reductions in birth rates, these developments do not begin to relieve pressures on the labor market for another 15 to 20 years. There is therefore great policy interest in comparing projections of future labor supply with labor demand to see whether future labor force growth will outstrip the capacity of these economies to generate jobs and, if so, by how much.[15] Labor surplus is conventionally measured in one of two ways, either as an unemployment rate or as the number of unemployed persons.[16] These indicators facilitate a judgment

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[15]In related work, Bradshaw and Frisbie (1983) estimated the potential demand for and supply of Mexican male labor by using the labor force replacement ratio--the ratio between the number of men who would become of working age during a decade and the projected number of deaths and retirements during a decade among men in the working ages at the beginning of the decade. Numbers above replacement indicate the approximate number of men for whom jobs must be created. Based on historical trends of economic growth in Mexico, the authors doubt whether new employment can be expanded by the 200 percent necessary to accommodate the influx to the labor market by the year 2000.

[16]As noted earlier, labor underutilization in the form of disguised unemployment or underemployment can still be a problem even if rates of open unemployment are low. As Gendell (1986) has noted, Latin American adult men who are heads of households cannot afford to be without any income for more than a brief period.

about whether labor shortages (an excess of labor demand over labor supply) or labor surpluses (an excess of supply over demand) are the more likely outcome.

Unemployment Rates. Unemployment rates are defined for a given period as the number of unemployed persons in the labor force (labor supply minus labor demand) divided by total labor supply and multiplied by 100. The resulting figure captures the percentage of persons willing and able to work who are without jobs. Projected unemployment rates for the period 1980-2010, calculated by matching the one labor supply projection to the low, medium, and high growth labor demand scenarios, are shown in Figures 8, 9, and 10, respectively.

There is a rapid acceleration in unemployment rates throughout the Caribbean Basin under the low growth projections. This acceleration is concentrated during the 1980s, but unemployment rates continue to rise in some cases to 2010. For the entire Basin area, the projected unemployment rate grows from 9 percent in 1980 to 16 percent by 1990 and again to 22 percent by 2010. Increases between 1980 and 2010 are especially pronounced for the Caribbean Islands (from 15 to 35 percent) and for Central America (from 7 to 28 percent).

Under the medium growth scenario labor demand for the entire Caribbean Basin region is projected to grow by 2.5 percent per year (compared with 2.1 percent under low growth), and this faster growth moderates the rise in unemployment rates. Continued (though smaller) increases to 2010 are still evidenced by the Caribbean Islands and Central America, but the rate peaks at 10 percent for the Southern Rim in 1990 and at 12 percent for Mexico in 2000 before receding. For the Caribbean Basin generally, unemployment rates reach a peak of 14 percent in 2000 before dropping back to 12 percent by 2010.

FIGURE 8. PROJECTED UNEMPLOYMENT RATES: LOW GROWTH

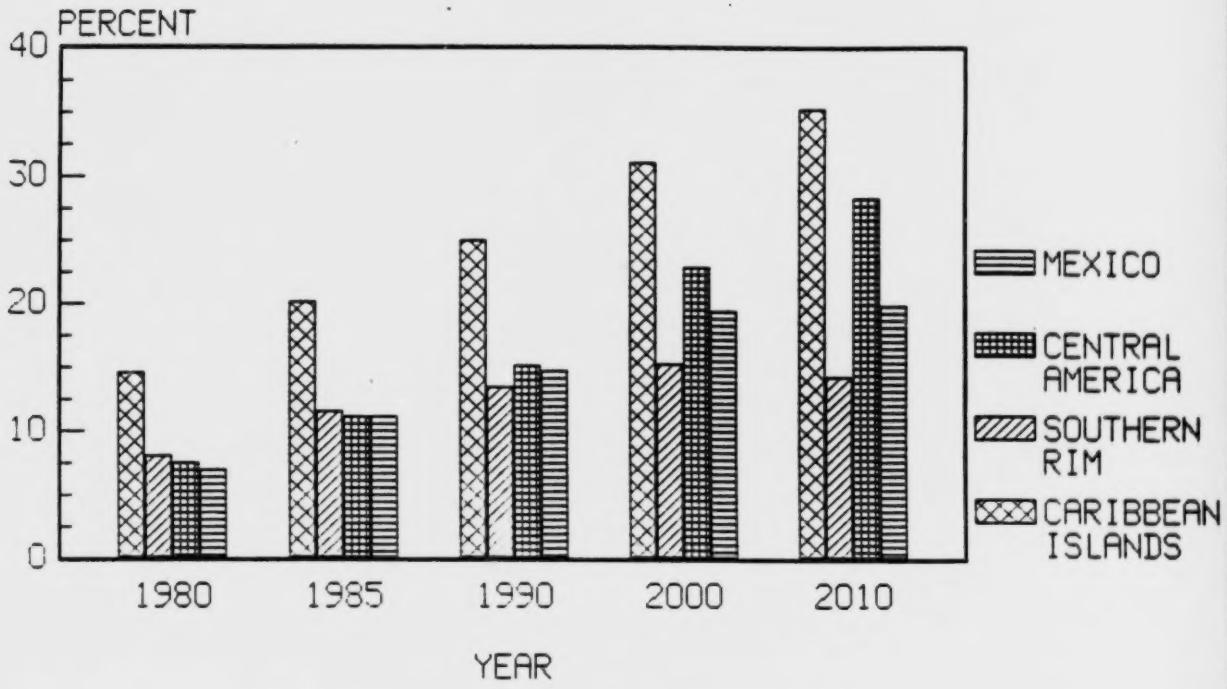


FIGURE 9. PROJECTED UNEMPLOYMENT RATES
MEDIUM GROWTH

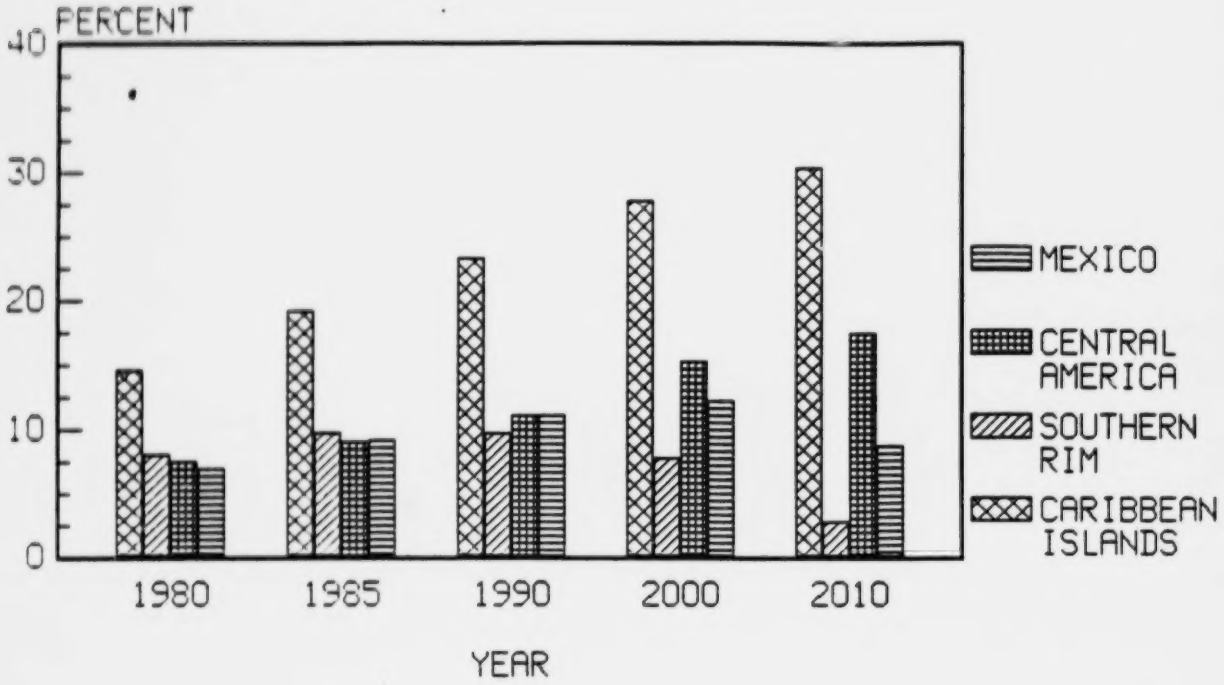
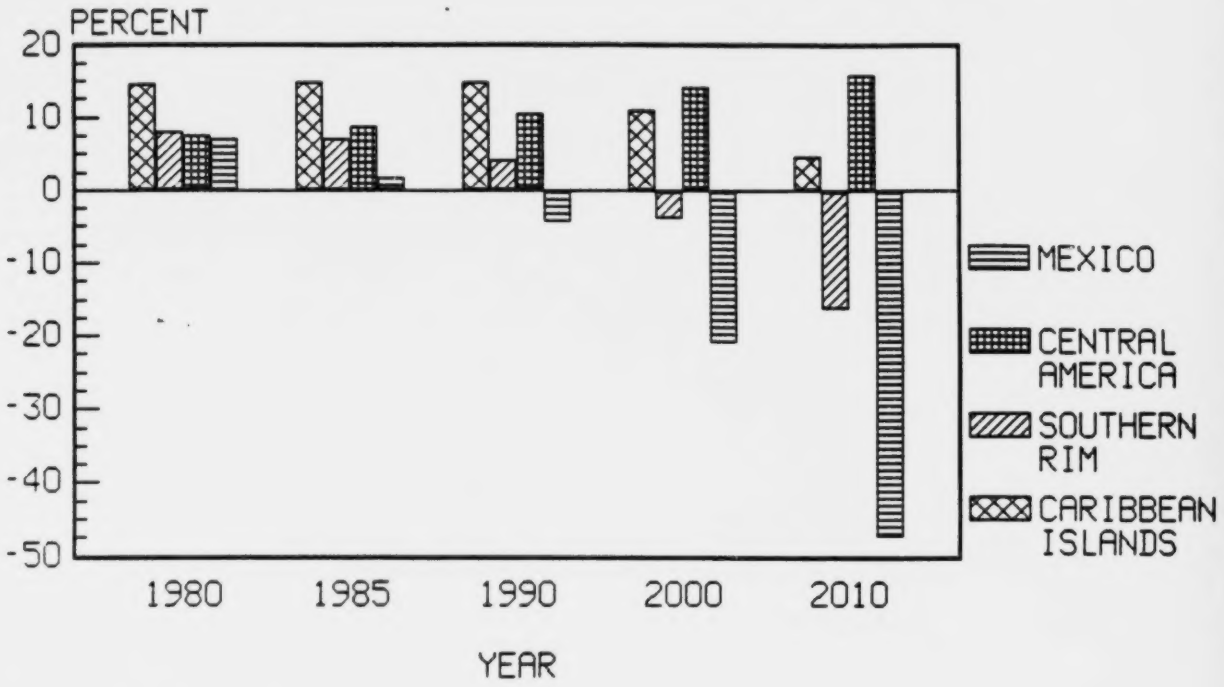


FIGURE 10. PROJECTED UNEMPLOYMENT RATES: HIGH GROWTH



If labor demand is assumed to grow at high rates (at 3.6 percent per year for the entire Basin), growth in certain regions is sufficiently fast that it overtakes labor supply before 2010 and gives rise to projected labor shortages (and therefore negative unemployment rates). This is the case in Mexico beginning in 1990 and in the Southern Rim beginning in 2000. Unemployment rates in the Caribbean Islands remain positive throughout the period but peak at 15 percent in the 1980s before declining to 5 percent by 2010. Only in Central America do rates of employed persons continue rising to 2010. For the four regions combined, the unemployment rate falls steadily from 9 percent in 1980 to 3 percent by 1990; it turns negative thereafter and reaches -21 percent by 2010.[17]

Number of Unemployed Persons. Another indicator of labor surplus is simply the number of unemployed persons. These data are shown in Figures 11, 12, and 13 for the low, medium, and high growth labor demand projections. For the entire Caribbean Basin there were nearly 5 million unemployed persons in 1980 (out of a total labor force of approximately 53 million). These persons

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[17]The negative unemployment rates in the high growth scenario do not appear reasonable, and not just for the reason that the assumptions underlying the high growth case seem unduly optimistic in general, as we have already noted. The growth rates in Table 1 that are used to project labor demand in the high growth scenario for the Southern Rim (3.28 percent) and for Mexico (4.29 percent) are the highest in the table and the only two that exceed 2.9 percent. Moreover, these unusually high growth rates were caused primarily by large gains during the 1970s in female labor force participation rates--gains that are not likely to be repeated. For example, between 1970 and 1980 the female labor force in Mexico grew at an average annual rate of 8.8 percent. The comparable figure for Venezuela was 7.2 percent (International Labour Office, 1986). The declines in unemployment rates observed for the Southern Rim and Mexico in the medium growth scenario occur because by the year 2010 rates of labor force growth have slowed sufficiently that they are below projected rates of labor demand. In Mexico, for example, the labor force is projected to grow at an annual rate of 2.35 percent between the years 2000 and 2010, whereas labor demand is assumed to grow by 2.70 percent annually (International Labour Office, 1986).

FIGURE 11. NUMBER OF UNEMPLOYED PERSONS
LOW GROWTH

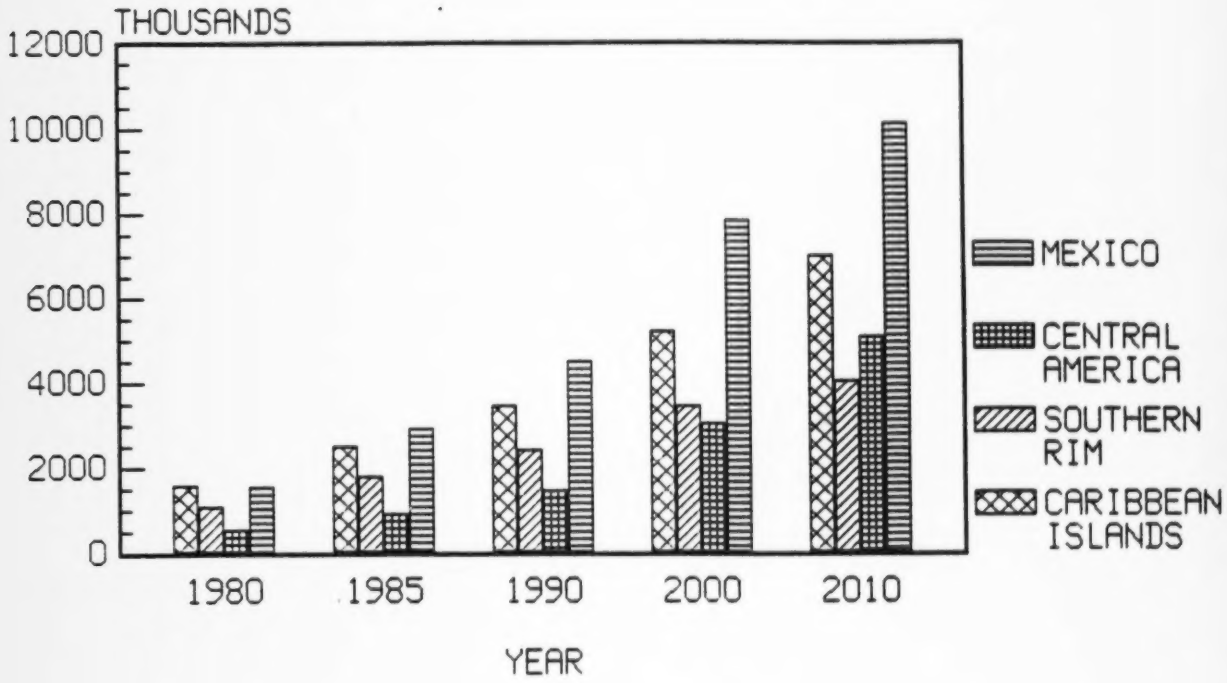


FIGURE 12. NUMBER OF UNEMPLOYED PERSONS
MEDIUM GROWTH

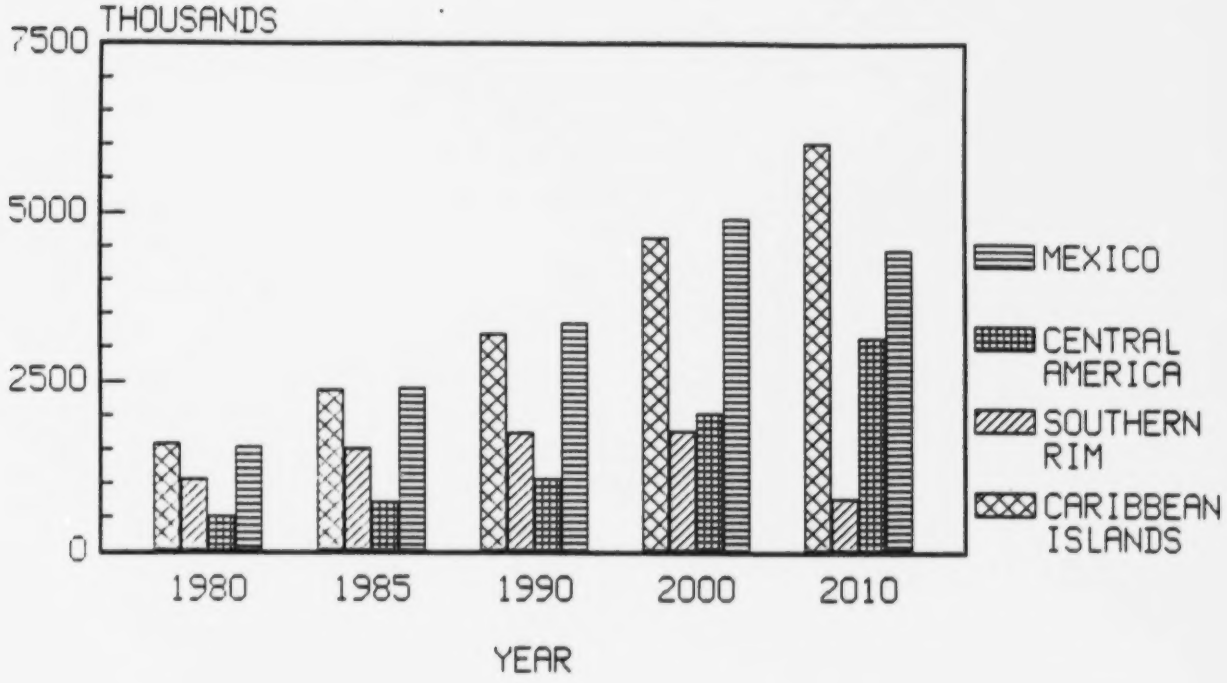
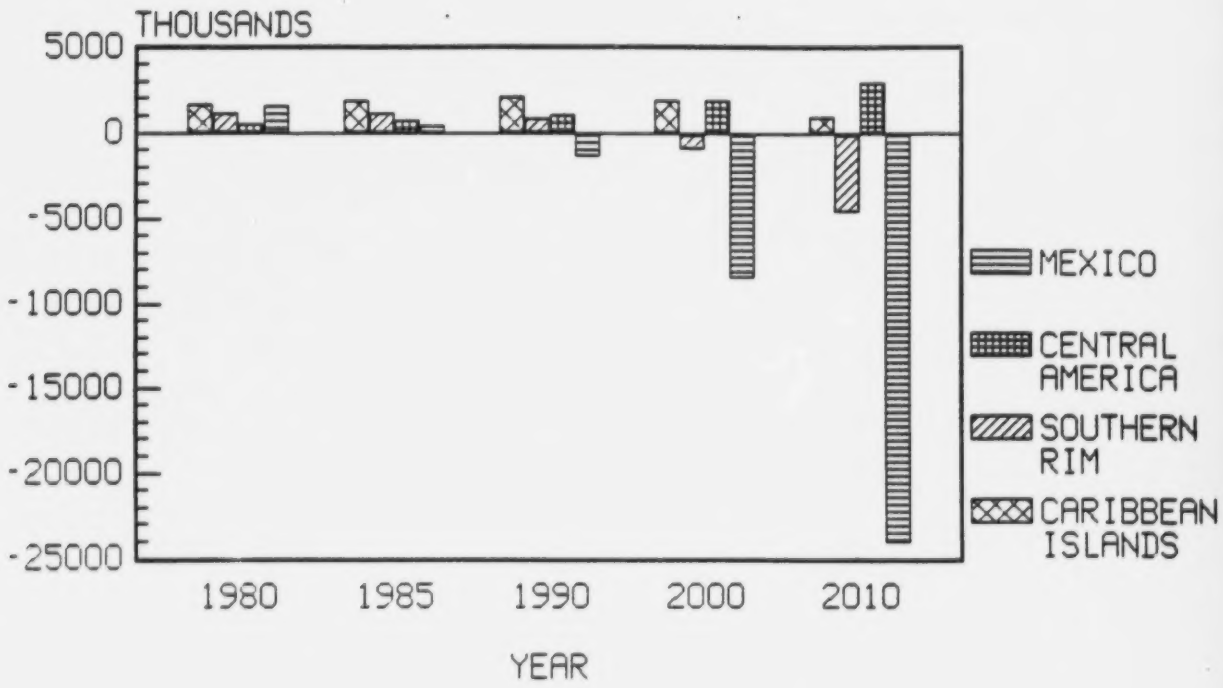


FIGURE 13. NUMBER OF UNEMPLOYED PERSONS: HIGH GROWTH



were distributed by region as follows: roughly one-third of the total in each of the Caribbean Islands and in Mexico, one million in the Southern Rim, and 500 thousand in Central America.

Under the low growth scenario the number of unemployed persons rises steadily throughout the 30-year period and peaks in 2010 at 10 million in Mexico, 7 million in the Islands, 5 million in Central America, and 4 million in the Southern Rim. These figures range between four and ten times as large as their corresponding 1980 levels. For the Caribbean Basin generally, the total volume of unemployment is projected to reach 26 million by 2010—more than 21 million greater than in 1980.

Numbers of unemployed throughout the Caribbean Basin rise less under the medium growth scenario than under low growth, but they increase steadily nonetheless to a total of 14 million by 2010--an increase of nearly 10 million persons over 1980. The total volume of unemployment by 2010 is greatest in the Caribbean Islands (6 million) followed by 4 million in Mexico, and has already turned sharply downward in the Southern Rim.

Projections of the level of unemployment in the Caribbean Basin quickly turn into expected labor shortages if labor demand follows the high growth path. For the four regions combined, the number of unemployed persons declines from nearly 5 million in 1980 to 2 million by 1990, and then turns negative beginning in the year 2000. By the end of the period labor shortages are expected in Mexico and the Southern Rim, and the projected surplus of labor in the Caribbean Islands has begun to fall. Only in Central America does the number of unemployed persons continue to rise.

IMPLICATIONS FOR U.S. IMMIGRATION

The amount of joblessness in the Caribbean Basin is already large, and it is growing. Under the medium growth scenario, for example, unemployment rates

are projected to continue rising through the year 2000. If jobs are not available in their own countries, workers have a strong incentive to migrate to countries where they can find employment. Increasingly, workers from the Caribbean Basin are coming to the United States in search of a better life for themselves and their families.[18] Rates of outmigration are especially high in the Caribbean Islands. Since the 1960s, the number of people who have migrated to the United States as a proportion of the current population in their respective countries of origin has ranged from a low of 9 percent in Haiti to over 25 percent in Barbados, with a regional average of 10 percent (Pastor, 1985). To some extent this immigration is driven by economic as well as noneconomic pull factors in the United States. But increasingly, it seems, migrants--especially undocumented migrants--are being pushed out of the Caribbean Basin by job prospects that are deteriorating rapidly and appear likely to worsen further in the next decade.

Legal immigration from the Caribbean Basin to the United States has surged in recent decades, especially since 1965 when country quotas were lifted and replaced by a preference system based on family reunification. In the 1940s legal immigrants from the Caribbean Islands, Mexico, and Central America made up just 13 percent of total U.S. legal immigration, but by the 1970s this proportion had reached 34 percent (Immigration and Naturalization Service, 1986). Because the total volume of legal immigration to the United States is also rising, the number of migrants from the Caribbean Basin is growing rapidly. Between 1981 and 1985, for example, immigrants from all Caribbean Basin regions totaled 919 thousand--nearly as many as the 1.1

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[18]Massey and Espana (1987) show that much of the migration from Mexico during the 1970s was facilitated by the social process of network growth, that is, by the expanding web of social ties that link potential migrants in sending countries to people in receiving societies.

million Caribbean Basin migrants that entered in the entire decade of the 1960s (Immigration and Naturalization Service, 1986). Of the 1981-1985 total legal immigrants from the Caribbean Basin, 37 percent were from Mexico followed by 11 percent each from the Dominican Republic and Jamaica.[19]

Migrants from the Caribbean Basin have favorite destinations in the United States, depending upon their place of birth. In fiscal year 1985, one-quarter of the legal migrants who were born in Mexico gave southern California as their intended place of residence; another 20 percent said Texas, and 7 percent listed the Chicago metropolitan area. Migrants from the Dominican Republic and Jamaica tended to favor the New York metropolitan area (including northern New Jersey). More than one-half of Jamaican migrants in 1985 and three-quarters of the migrants from the Dominican Republic gave the New York City region as their intended home. South Florida was the intended destination for more than one-third of Cuban migrants, followed by New York (20 percent).

Undocumented or illegal immigration to the United States has also been on the rise, prompting concerns that led to the IRCA legislation in 1986. Warren and Passel (1987) estimated that nearly 2.1 million undocumented immigrants who were residents of the United States were enumerated in the 1980 decennial census, and the Panel on Immigration Statistics (1985) of the National Academy of Sciences concluded that the total number of illegal aliens in the country was probably in the 2 to 4 million range. Warren and Passel calculated that roughly 940 thousand, or 46 percent, of all enumerated illegals entered the United States between 1975 and 1980 and that another 28 percent came in the

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[19]Cooper (1985) found that for Jamaica the immigration policies of receiving countries are more influential in shaping the volume and composition of the migrant population than is the policy orientation of the domestic administration.

five years before that. Mexico led the list of countries sending undocumented immigrants to the United States with more than 1.1 million or about 55 percent of the total. The Central American countries of El Salvador and Guatemala together contributed just 4 percent of the total, whereas the Caribbean Islands countries of Cuba, the Dominican Republic, Haiti, Jamaica, and Trinidad and Tobago comprised 7 percent.[20]

Passel and Woodrow (1984) estimated the geographic distribution of the counted undocumented immigrants in the 1980 census and concluded that half, or 1,024,000 persons, resided in California. Sizeable numbers were counted in New York (234,000), Texas (186,000), Illinois (135,000), and Florida (80,000). Two out of every three Mexican undocumented immigrants lived in California, with another 13 percent in Texas and 9 percent in Illinois. New York was home to about 70 percent of the illegal migrants from Haiti, Jamaica, and Trinidad and Tobago. Passel and Woodrow (1986) found that the size of the undocumented alien population continued to grow between 1980 and 1983 by about 200,000 persons per year. Mexican immigrants accounted for roughly 95 percent of this increase.

Data from the 1980 decennial census give an overall picture of the demographic impact of immigration in California, Texas, and Florida—three states in the south and southwest that are prominent destinations for immigrants from the Caribbean Basin and that contain about 40 percent of all foreign-born persons in the United States. This immigration is large and much of it is recent. For example, three-fifths of the 1.3 million foreign-born Mexicans in California in 1980 came to the United States during the 1970s. In

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[20]It is important to add that, unlike the majority of undocumented workers from Mexico and Central America, many of the illegal migrants from the Caribbean Islands arrive in the United States legally and subsequently overstay their visas (Pastor, 1985).

addition, over half of California's immigrants from other parts of Central and South America came during the same period (U.S. Bureau of the Census, 1983a). In Texas, the 500 thousand immigrants from Mexico made up almost 60 percent of the state's foreign-born population in 1980, and more than half of these came during the 1970s (U.S. Bureau of the Census, 1983c). In Florida, Cubans--most of whom came during the 1960s--were the largest group of immigrants and made up over one-third of Florida's 1.1 million foreign-born persons in 1980. Immigrants from other parts of the Caribbean Basin are fewer in number, but there is evidence that this immigration is accelerating. For example, five out of every six of the 17 thousand Haitians in Florida in 1980 came to the United States during the 1970s. Three-fifths of the 80 thousand Central Americans and three-fifths of the 61 thousand South Americans also came in this period (U.S. Bureau of the Census, 1983b).

THE NEED FOR ADDITIONAL JOB CREATION

The projections presented in this paper suggest that pressures for both legal and illegal entry to the United States from the Caribbean Basin will mount for the remainder of this century. The lack of jobs and low wages in the Caribbean Basin will be a strong incentive for migrants to leave; jobs in the United States will be a strong magnet. The United States and other industrial countries, however, cannot be a safety valve for all the unemployment in the Caribbean. Nor should they necessarily attempt to be. Although emigration generally reduces unemployment in sending countries, it also reduces the quantity of skilled manpower and may represent an impediment to economic development in the Caribbean region (Pastor and Rogers, 1985). Therefore the policy question for leaders in the United States and in the Caribbean Basin is what can and should be done about the situation.

Problems surrounding the expanding imbalance between the number of potential workers and the smaller number of available jobs in the Caribbean Basin have many causes, although a prominent one that has already been mentioned is the rapid acceleration in population growth during the 1950s and 1960s stemming from the reduction in death rates. This suggests that part of the solution to growing joblessness lies in slower rates of population growth.[21] Many Latin American governments have in fact already taken vigorous steps to promote and support family planning programs. But achieving substantial reductions in birth rates in low-income countries is not something that can be expected to happen immediately. And even if birth rates were to drop sharply, there would still be a delay of 15 or 20 years before salutary effects on the labor force were felt.

Job creation in the economies of the Caribbean Basin nations has to be another element in the solution. This necessity has been recognized as part of the Reagan administration's Caribbean Basin Initiative (CBI)—a combination of trade, aid, and investment incentives designed to encourage new business while promoting political and social stability in the Caribbean area.[22] At

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[21]Despite the plausibility of this proposal, however, the recent National Academy of Sciences' study of the relationships between population growth and economic development concluded that, "A reduced rate of urban labor force growth in developing countries . . . is not likely to be systematically accompanied by corresponding reductions in joblessness" (National Research Council, 1986, p. 87). And Preston (1986) has observed that, "Rates of labor force growth across countries and over time are not found to be statistically related to unemployment levels. The low-wage informal sector in developing countries evidently has substantial capacity to 'absorb' labor" (p. 80). Bloom and Freeman (1986) conclude that, "Population and labor force growth are not necessarily strongly related to labor absorption" (p. 382). If anything, the empirical evidence supports what they call "population neutralism."

[22]The Caribbean Basin Initiative does not extend to Mexico, but Mexico has substantially benefited from the Generalized System of Preferences (GSP)—a tariff program antedating the CBI but not focused on a particular region. The GSP includes about 120 countries—primarily noncommunist developing countries.

the heart of the CBI is a twelve-year elimination of duties on Caribbean fruits and vegetables, electronic parts, meat and meat packaging, tobacco, rum, and many other products, aimed at giving Caribbean producers greater access to U.S. markets. There is evidence that the CBI has stimulated new projects in the region and succeeded in retaining some industries that were tempted to relocate (Wall Street Journal, 1984; Wylie, 1985). But despite some progress, the CBI is plagued by a number of shortcomings. Critics contend that the exclusion of textiles, apparel, footwear, and other leather goods from the list of commodities receiving preferential treatment removes items that have more growth potential than anything else in the Caribbean. Moreover, they argue that the amount of aid being provided along with the CBI is small (less than $900 million in 1984) and that much of it is directed toward Honduras, Costa Rica, and El Salvador where there is a perceived threat of communist expansion (Wall Street Journal, 1984). Finally, as Bouvier and Simcox (1986) note, "Repeated U.S. cuts in sugar imports since 1982 have cost Caribbean nations more jobs than the Caribbean Basin initiative has so far created" (p. 53).

Part of the CBI's strategy is to curtail the public sector's involvement in business expansion and to rely on the private sector for economic development and to provide new jobs. But because a well developed industrial base, infrastructure, and pool of managerial talent are currently lacking, it is not clear that the private sector will be able to assume the additional responsibilities given to it. As a result, the short-term effects of the CBI are likely to be small, and any added development that does occur could be driven largely by U.S. investors. In some instances this could reduce employment rather than increase it. For example, Ricketts (1985) points out that, to the extent that U.S. investors employ capital intensive and other

inappropriate technologies, deep-seated problems of structural unemployment in Caribbean Basin countries may be aggravated.[23] Also, as Pelzman and Schoepfle (forthcoming) have concluded, a truly development-oriented program should focus both on attracting manufacturing firms away from the Pacific Basin to the Caribbean region and on encouraging the development of the necessary infrastructure in the Caribbean to support the establishment of internal markets. In short, efforts stronger than the CBI will doubtless be needed if the gap between the number of job seekers and the number of available jobs is to be narrowed.

Policy initiatives conducive to fertility reduction and to job creation do not exhaust the set of possibilities. Nor are these choices mutually exclusive. Many countries make an effort to deal with these problems on several fronts simultaneously. Nonetheless, the policy questions on which the remainder of this paper focuses relate to job creation. How many additional jobs must be created? Where must these efforts be concentrated among the four regions of the Caribbean Basin? When will the greatest efforts be needed? And how much is this additional job creation effort likely to cost?

Answers to the question of how many additional jobs have to be generated depend upon the particular policy target one is trying to achieve. Here we consider three policy targets or thresholds, ordered in terms of how difficult they are to attain, how many extra jobs they require, and how much they might cost. First, and most demanding, policy makers may wish to hold the line on

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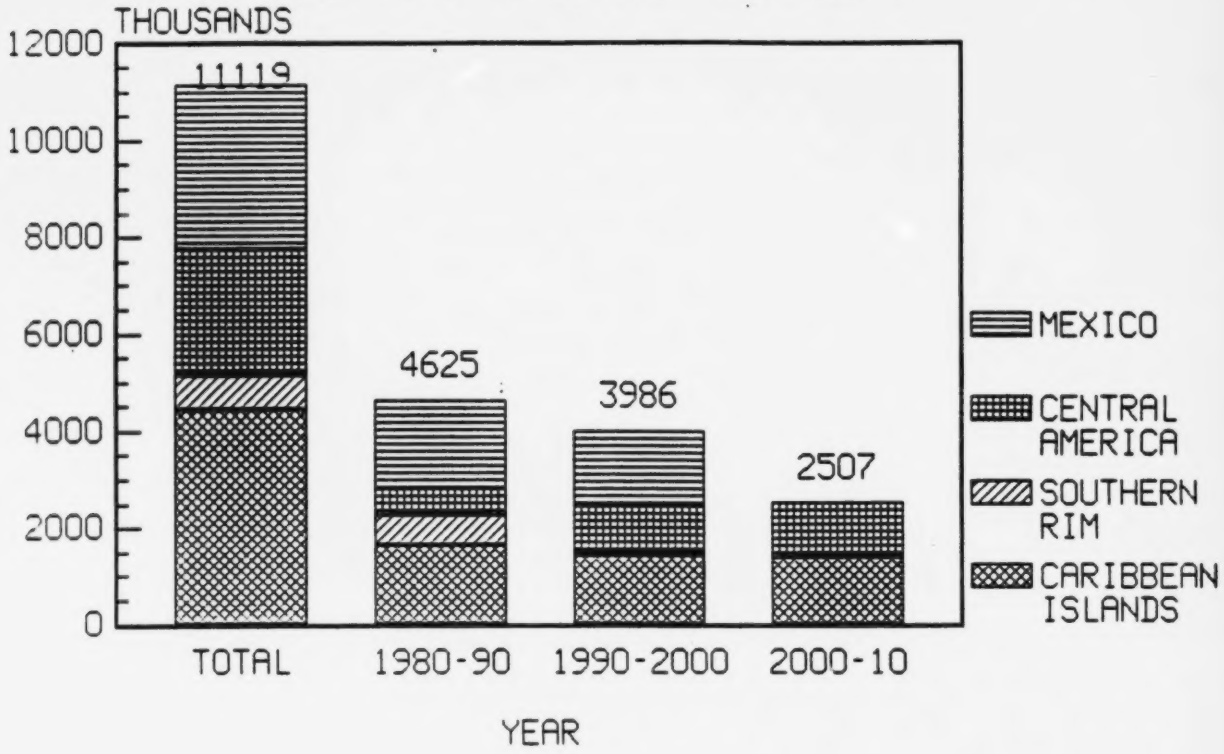
[23]This argument is substantiated by Massey et al. (1987). In a personal communication, Douglas Massey has noted that this argument is important because many people, including a congressman he has spoken with, believe that simply sending tractors down to "improve" Mexican agriculture will stop migration, when precisely the opposite will most likely happen, because mechanization will disrupt the traditional social organization of agricultural production and displace many workers.

the number of people who were unemployed in 1980 and not let that volume of unemployment increase further between 1980 and 2010. Second, 1980 unemployment rates might constitute the ceiling that policy makers do not wish to exceed. Third, and most lenient, policy makers may feel satisfied as long as unemployment rates do not exceed 150 percent of their 1980 levels at any time during the 1980-2010 period.

To assess how many extra jobs will be needed according to each of these policy thresholds, we assume that labor demand will increase according to the medium growth scenario between 1980 and the year 2010. As long as the number of jobs that are projected to be generated under this scenario is sufficient to meet each of the three policy targets, we assume that no additional efforts are required. Our estimates in this section pertain only to those instances where the medium growth scenario is insufficient to meet the specified policy threshold and where extra job creation activities are then needed. Labor demand might not grow according to the medium growth scenario. If future labor demand follows a course more accurately described by the low growth scenario, then our estimates of the number of new jobs needed and the cost of creating these extra jobs will be too low. Alternatively, our calculations will lead to overestimates if labor demand follows the high growth scenario. As was suggested previously, future labor demand might be expected to grow at rates somewhere between the low and the medium growth outcomes. If this expectation materializes, then the estimates discussed here may be considered conservative estimates.

The amount of extra jobs that will be needed to prevent the number of unemployed persons from exceeding its 1980 total in any region of the Caribbean Basin between 1980 and 2010 is shown in Figure 14. A total of 11.1 million extra jobs will be required over and above those the medium growth

FIGURE 14. EXTRA JOBS NEEDED: POLICY THRESHOLD--1980 NUMBERS OF UNEMPLOYED



labor demand scenario is projected to yield. Most of these jobs will have to be concentrated in the Caribbean Islands (40 percent) and in Mexico (30 percent). Only about 6 percent are projected to be needed in the Southern Rim. Figure 14 also shows that the most urgent efforts at job creation are needed in the 1980s. Almost 42 percent of the total jobs are needed in the current decade, whereas the number required between 2000 and 2010 drops to 23 percent of the total.

The job creation efforts mandated by the desire to prevent unemployment rates from rising above their 1980 levels are shown in Figure 15. Under this policy threshold, 7.4 million additional jobs are needed--fewer than in Figure 14 because constant unemployment rates permit the number of unemployed persons to increase with an expanding labor force. However, the regional and temporal patterns of job creation are similar to those in Figure 14. The Caribbean Islands (43 percent) and Mexico (29 percent) again lead the list of where most of the efforts will be needed. And, as before, the evidence suggests that the greatest efforts are needed immediately.

The picture changes abruptly if one is prepared to wait until unemployment rates reach 150 percent of their 1980 levels before undertaking new employment-generating activities. In this case, as shown in Figure 16, the number of additional new jobs needed between 1980 and 2010 falls to 3.6 million, and nearly 90 percent of them can be postponed until after 1990. Under this policy threshold no additional job creation efforts will be needed at all in the Southern Rim because projected labor demand under the medium growth scenario is adequate to hold unemployment rates in this region below 150 percent of their 1980 level. More than half of the new jobs (52 percent) will be needed in the Caribbean Islands, 30 percent will arise in Mexico, and less than 20 percent will be needed in Central America.

FIGURE 15. EXTRA JOBS NEEDED: POLICY THRESHOLD--1980 UNEMPLOYMENT RATES

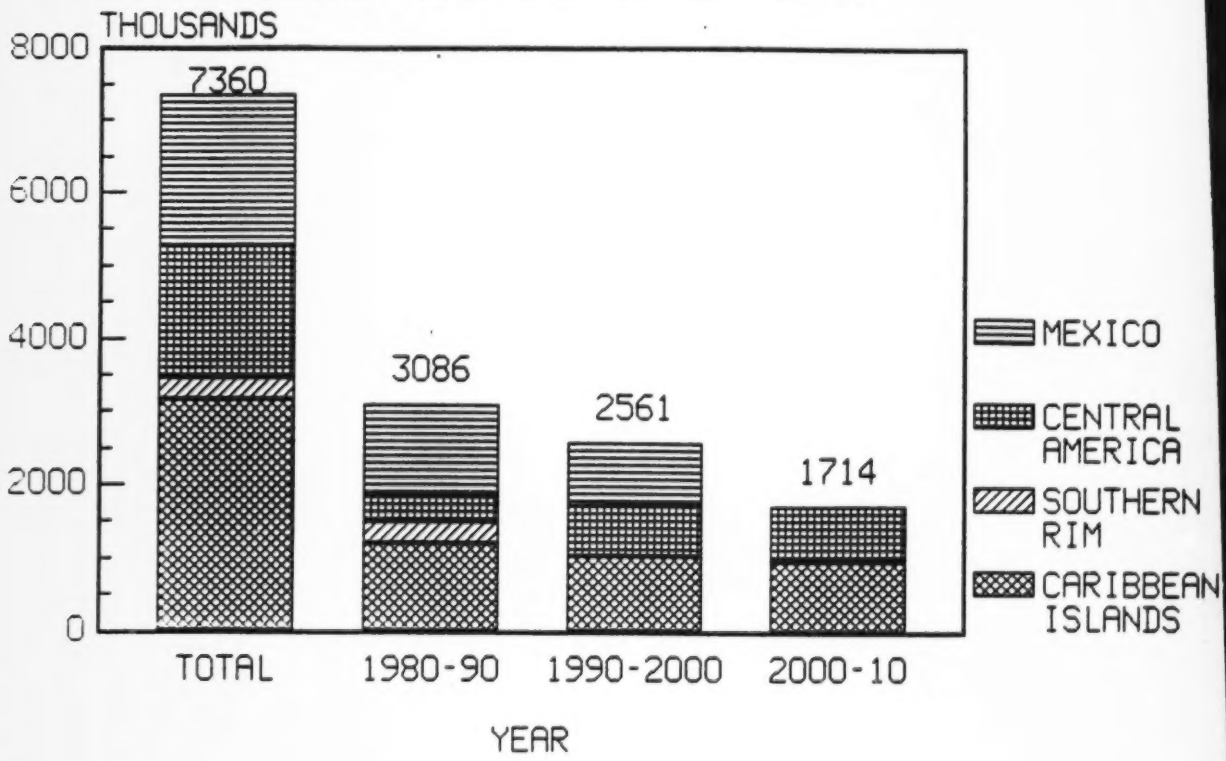
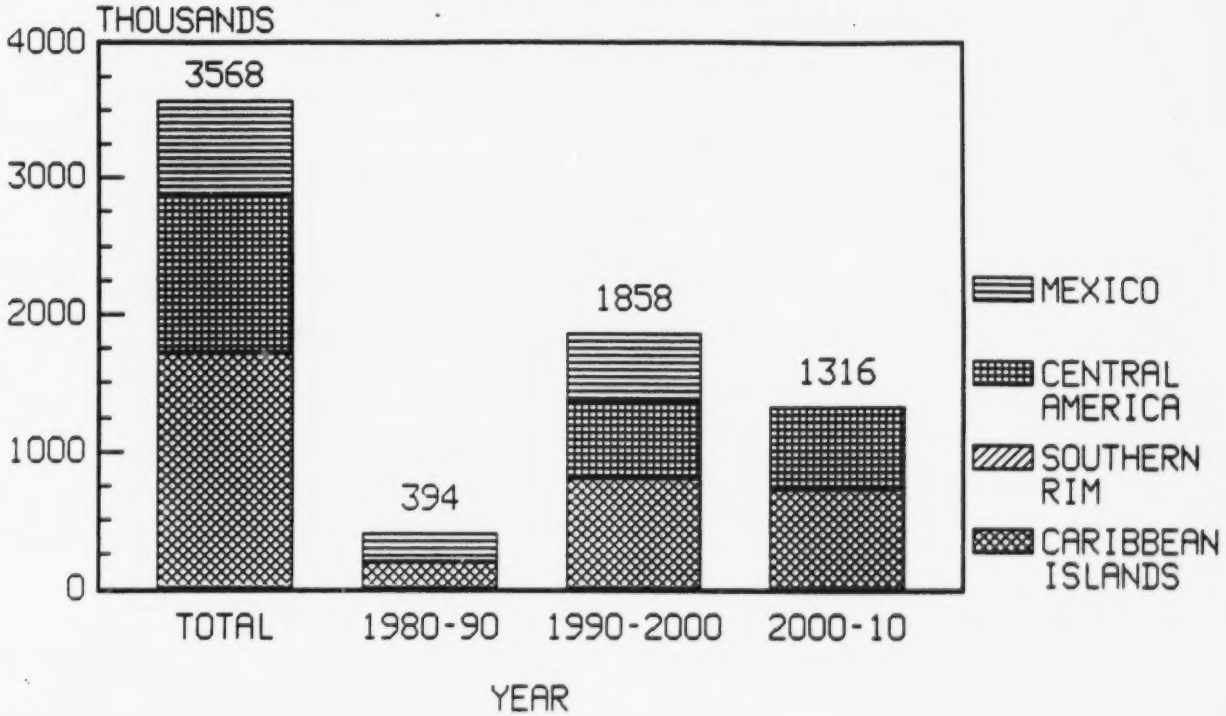


FIGURE 16. EXTRA JOBS NEEDED: POLICY THRESHOLD--150 PERCENT OF 1980 UNEMPLOYMENT RATES



THE COST OF EXTRA JOBS

The final question this paper addresses is how much will it cost to generate the jobs required by each of the three policy targets we have discussed. This is a difficult question to answer and one that cannot be answered precisely. For one thing, there is uncertainty built into the projections of both labor demand and labor supply. Unlike labor supply, however, which can be forecast reasonably accurately, at least for the next 20 years or so because practically all those individuals who will enter the labor force within that period are now alive, projections of labor demand are subject to much greater volatility because they depend upon the performance of the economy, which is inherently more difficult to forecast.

Second, the cost of additional jobs depends upon the types of jobs being created. Jobs requiring very little capital, such as some in agriculture, may be relatively inexpensive to generate (although the extra output one gets as a result of these jobs may be low if agriculture is already characterized by unemployment or underemployment). Jobs in the primary sector that have high capital/labor ratios may be extremely costly to create. The job mix--whether high skill or low skill and whether capital intensive or labor intensive—will therefore be important in determining the cost of new job creation.[24] In addition, planners will have to decide whether new jobs should be directed to urban or rural areas, which sectors and industries are likely to benefit most from additional jobs, and whether within the Caribbean Islands, for example,

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[24]On a related point, Murray Gendell has suggested to me that if it is reasonable to assume that productivity and the investment cost per job are positively related, then raising productivity also raises the cost of job creation. As he notes elsewhere (Gendell, 1986), this indicates that the goals of increasing employment and raising levels of living (via wage-enhancing productivity gains) are difficult to reconcile.

it is more advantageous to concentrate new jobs in just one or two countries or to distribute them in some more uniform fashion. Each of these decisions will influence the cost of creating new jobs, but to consider the many permutations that are possible goes beyond the scope of this paper.[25]

Finally, the cost of new job creation is likely to depend upon whether one relies upon the public or the private sector for the augmented activity. The ability of the indigenous private sector to generate additional jobs may already have been taken into account in the projections of labor demand. If that is the case, then new job creation may be the responsibility of the

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[25]Other considerations can help to narrow the range of alternatives. The available skills possessed by the indigenous labor force, for example, will influence the types of jobs one aims to create. As a consequence, economic policy and educational policy ought to be closely coordinated in planning for the economic futures of Caribbean Basin nations. Such coordination appears to be badly needed. According to a new study, Employment and Youth in Latin America, carried out by the Regional Employment Program for Latin America and the Caribbean (PREALC), young people in Latin America are finding that their education is not in line with the real needs of the labor market. The economic crisis together with structural changes in production have limited many young jobseekers to the informal and agricultural sectors. Jobs in the formal sector have diminished, and the percentage of young people who have found their way into it has tended to be lower than that of the older workforce (International Labour Office, 1987). With government efforts to spread literacy in the region, particularly in urban areas, and with the school system encompassing ever-growing numbers of young people, the percentage entering the workforce before the age of 20 is much lower than it was in 1950 (International Labour Office, 1987). This rise in secondary education enrollments is reflected in declining labor force participation rates for persons under age 20. In Mexico, for example, participation rates for persons 10 to 14 years old fell from 16.20 in 1950 to 6.55 in 1980. In the ILO labor force projections, these rates are expected to fall further to 0.10 by the year 2025. In the 15 to 19 age range, participation rates declined from 48.10 in 1950 to 41.60 in 1980 and are projected to reach 30.70 by 2025 (International Labour Office, 1986). Similar trends are evident for the other regions in the Caribbean Basin. Because those persons aged 15 to 24 represent a third of the economically active population throughout all of Latin America, the opening of educational doors has been a major factor in reducing the rate of labor force growth. It is doubtful, however, that expanding enrollments will eventually tie people to their domestic labor market if the kind of education they are receiving fails to match the needs of the domestic economy.

public sector. On the other hand, the role of the public sector is deliberately being scaled down under the terms of the Caribbean Basin Initiative, which suggests perhaps a greater future role for private investment from the United States and other industrial nations.

Even with these caveats, there is interest in knowing how much might have to be expended to meet the policy targets addressed in Figures 14, 15, and 16. If the public sectors in Caribbean Basin countries are expected to produce the extra jobs, then some estimate of the cost will be needed. Alternatively, if the industrialized nations should shoulder some of the responsibility in the form of loans, outright grants, or other forms of aid, an estimate of the size of the task again is required. The cost estimates presented here should be regarded as preliminary and only approximate. Nevertheless, they serve a purpose in helping to answer a fundamental question. Even with assistance from the United States and other developed countries, can the imposing problems of job creation in the Caribbean Basin between now and the early part of the next century be surmounted?

Estimating the cost of creating <u>one</u> additional job has been approached in the following way. The numbers in Table 3 develop an estimate of gross domestic investment per new labor force entrant. It is an estimate based on 1982 data for most of the major countries in the Caribbean Basin area, and it shows how much investment in new plants and equipment was generated in each of these countries for each new member of the labor force. This estimate, shown in column 6, should not necessarily be interpreted as the amount these countries must invest for each new person entering the labor force. This latter number is, in fact, highly variable. The estimate shows instead how much each of these countries did in fact invest at one point in time. Once

Table 3

Gross Domestic Investment Per New Labor Force Entrant: Selected Caribbean Basin Countries, 1982

	GNP Per Capita (1982 dollars) (1)	GDP 1982 (millions of dollars) (2)	Investment Ratio 1982 (percent) (3)	Gross Domestic Investment (billions of dollars) (4)	Increase in Labor Force 1981-1982 (millions) (5)	Investment Per New Labor Force Entrant (thousands of 1982 dollars) (6)
Caribbean Islands						
Haiti	300	1,640	11	0.18	0.038	4.74
Dominican Republic	1,330	7,230	21	1.52	0.057	26.67
Jamaica	1,330	3,180	20	0.64	0.021	30.48
Trinidad and Tobago[a]	6,840	6,970	34	2.37	0.010	237.00
Southern Rim						
Colombia	1,460	34,970	26	9.09	0.322	28.23
Venezuela[a]	4,140	69,490	26	18.07	0.163	110.86
Central America						
Honduras	660	2,520	16	0.40	0.037	10.81
El Salvador	700	3,680	11	0.40	0.053	7.55
Nicaragua	920	2,940	19	0.56	0.029	19.31
Guatemala	1,130	8,730	14	1.22	0.065	18.77
Costa Rica	1,430	2,580	23	0.59	0.026	22.69
Panama	2,120	4,190	29	1.22	0.019	64.21
Mexico	2,270	171,270	21	35.97	0.739	48.67

Sources: International Labour Office, Labour Force Estimates and Projections: 1950-2000, Geneva, 2nd edition, 1977; The World Bank, World Development Report, 1984, Oxford: Oxford University Press, 1984.

a. The economies of Trinidad and Tobago and of Venezuela are dominated by oil exports, which help to explain their relatively high per capita incomes and possibly their high levels of new investment per labor market entrant.

estimates of gross domestic investment per new labor force entrant were developed for the individual countries in Table 3, an aggregate estimate was formed for each of the four major regions of the Caribbean Basin by taking a weighted average of the values of each country in the region, using the estimated 1982 populations for each country as weights. These procedures produced the following estimates: $35,500 of investment for each new member of the labor force in the Caribbean Islands, $59,800 in the Southern Rim, $19,000 in Central America, and $48,700 in Mexico.

These estimates of investment expenditure for each new job added to the labor force were then multiplied by the numbers in Figures 14, 15, and 16 to derive an estimate of the total cost of creating all the additional jobs required between 1980 and 2010 to meet each of the policy thresholds. Figure 17 indicates that approximately $413 billion of additional investment expenditure would be required to prevent the volume of unemployment from exceeding the number of unemployed persons in 1980. Most of this investment would have to be directed toward Mexico (40 percent) and the Caribbean Islands (38 percent). Smaller amounts would be needed in the Southern Rim and in Central America, either because fewer jobs are needed (as in the Southern Rim) or because the investment cost per job is low (as in Central America). Figure 17 also suggests the need for immediate action. Of the total investment expenditure that is projected over the 30-year period, nearly half (47 percent) is expected to come due during the decade of the 1980s.

To prevent unemployment rates from exceeding their 1980 levels would take a prospective amount of investment expenditure of almost $267 billion between 1980 and 2010 (Figure 18). Most of this amount would have to be invested in the Caribbean Islands (42 percent) and in Mexico (39 percent), and nearly half

FIGURE 17. ESTIMATED COST OF CREATING THE EXTRA JOBS IN FIGURE 14

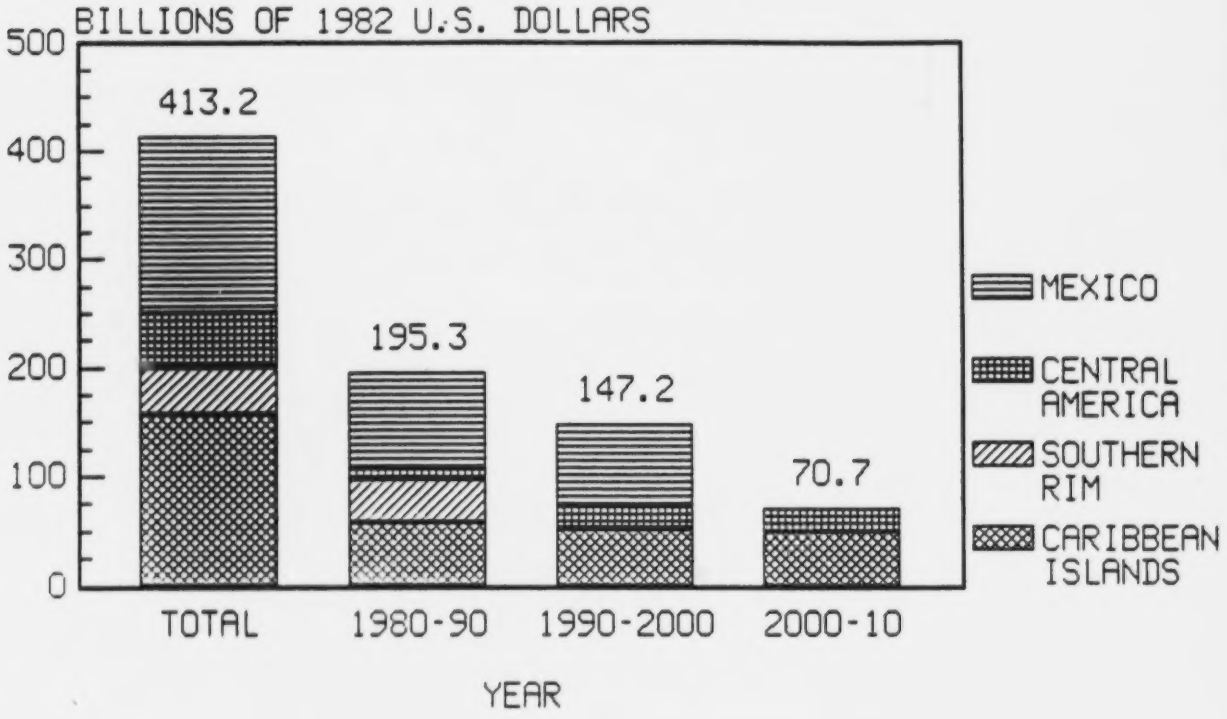
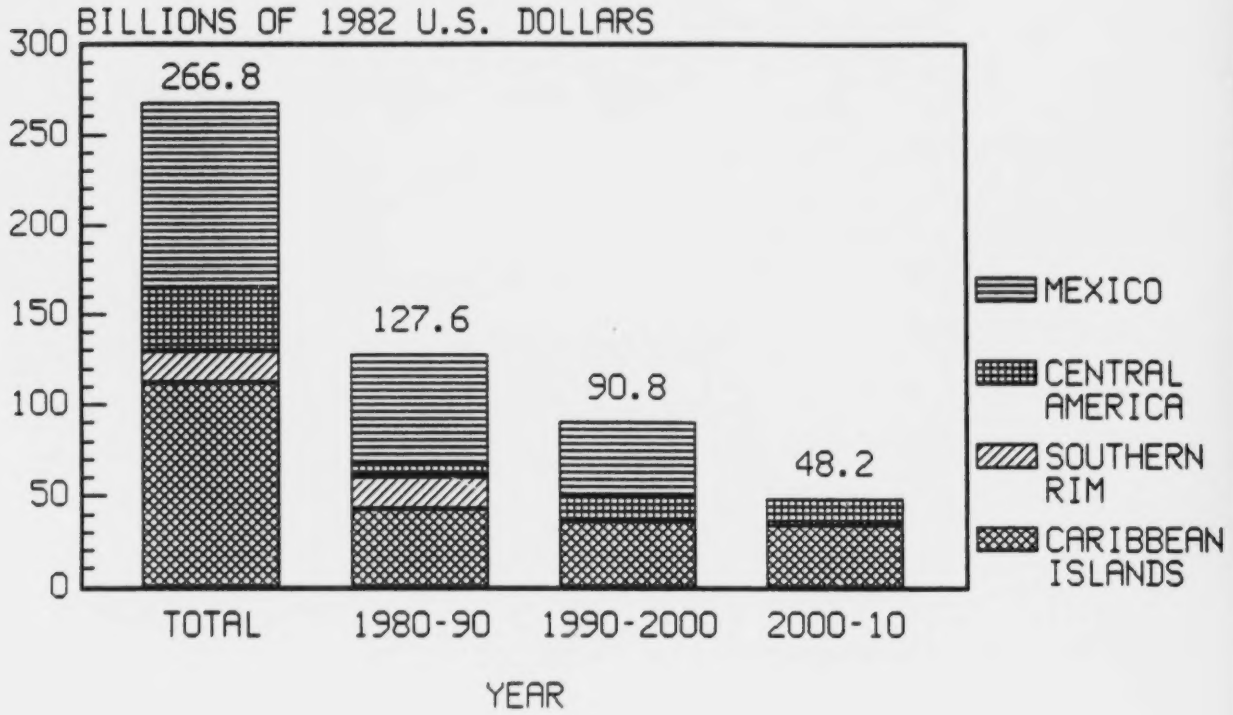


FIGURE 18. ESTIMATED COST OF CREATING THE EXTRA JOBS IN FIGURE 15



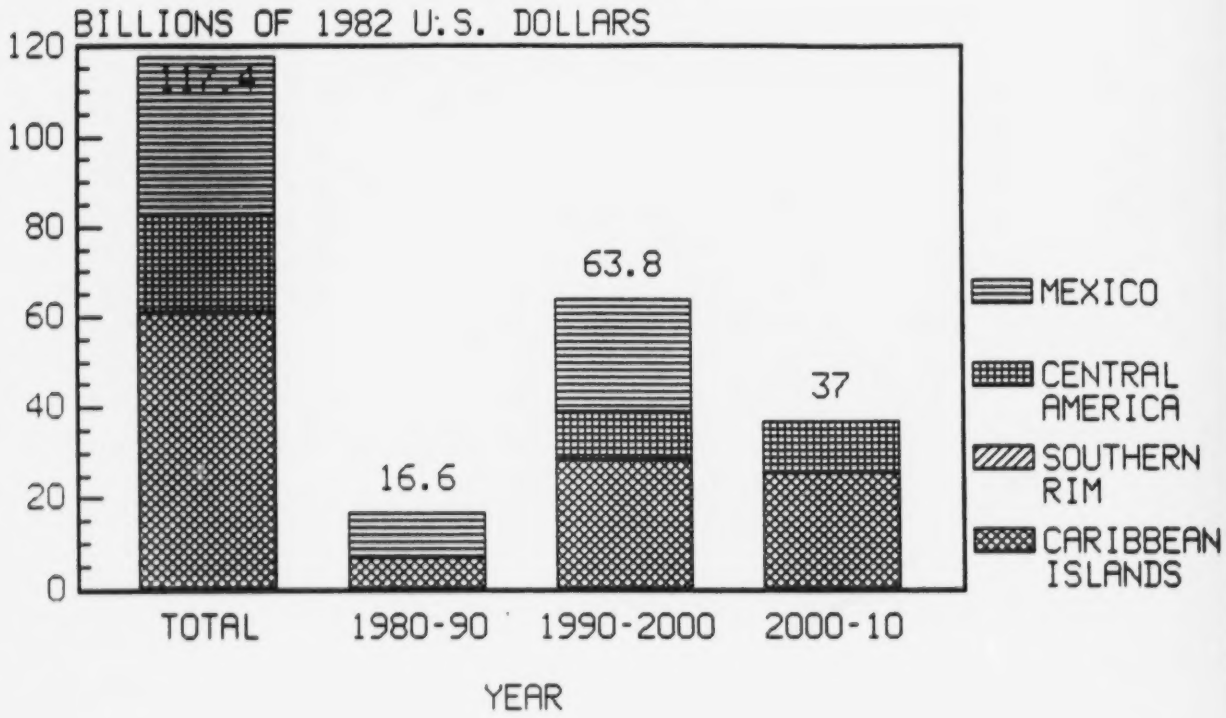
of the total needs to be provided during the 1980s. The least expensive policy alternative is the one that allows unemployment rates to drift upward to 150 percent of their 1980 levels before corrective action is taken (Figure 19). The total estimated cost of this policy response is $117 billion. This alternative also buys time in the sense that just 14 percent of the total cost accrues during the 1980s decade. More than half (54 percent) comes due during the 1990s, and almost one-third (31 percent) occurs during the first decade of the twenty-first century. The cost of delay, however, is reflected in both higher numbers and rates of unemployed persons.

CONCLUSIONS

Long-term solutions to the problem of rising joblessness in the Caribbean Basin must inevitably focus on continued fertility reduction and on accelerated efforts toward economic development. The next 20 or 25 years are especially critical. Beyond this time frame, rates of growth of the economically active population are projected to fall below 2 percent per annum--down considerably from their peak of 3.4 percent per annum during the 1970s. Because fertility rates in Caribbean Basin countries have been declining and are projected by the United Nations to fall further, this paper has focused instead on the need for additional job creation to correct growing imbalances between labor supply and labor demand.

Several conclusions are worth emphasizing. First, there is an emerging awareness of the mutual interdependence between the United States and countries below our southern border. Increasingly, what happens in Mexico, Central America, and the rest of Latin America is acknowledged to have economic, social, and political consequences for the United States. International economic relations that were once largely limited to flows of

FIGURE 19. ESTIMATED COST OF CREATING THE EXTRA JOBS IN FIGURE 16



goods and services now involve significant international labor migration flows as well. As a consequence, the self-interest of the United States lies in accepting more responsibility for economic development in the Caribbean Basin. Solutions to rising joblessness in the region ought ultimately to be based on a North-South cooperative effort.

Second, according to the estimates discussed in this paper, most of the new jobs that will be required and most of the investment expenditure that will be needed to achieve the alternative policy targets outlined will have to be concentrated in Mexico and in the Caribbean Islands. Regardless of the policy threshold that is invoked, roughly 70 percent of the new jobs and approximately 80 percent of the new investment expenditure will be needed in these two regions combined. Moreover, of the four major regions in the Caribbean Basin, these are the two that are closest to the United States. Thus it is perhaps not a coincidence that, as was already noted, Mexico and the Caribbean Islands lead the Caribbean Basin nations in terms of the number of both legal and undocumented immigrants coming to the United States.

Third, there is a special urgency to the task. With the exception of the policy threshold that allows unemployment rates to increase to 150 percent of their 1980 levels, between 40 and 50 percent of both the new jobs needed and the new investment expenditure required between 1980 and the year 2010 must be concentrated during the decade of the 1980s.

Fourth, as noted previously, the world labor situation since 1980 has been marked by growing impoverishment of Third World populations, persistently high unemployment in many industrialized democracies, and falling work incomes in most parts of the world (International Labour Office, 1987). The data in Table 2 that show growth rates in real GDP for selected Caribbean Basin

countries suggest that the Caribbean Basin has not escaped these worldwide trends and may have fared even worse. In light of these developments, it is unlikely that a turnaround in labor demand can occur quickly enough to keep job creation efforts on track by 1990. This implies that there will be much catching up to do after 1990 and that the temporal arrangement of job scheduling activities will need to be accelerated beyond the levels indicated by Figures 14 and 15 to achieve the implied policy targets by the year 2010.

Fifth, it appears likely that the Caribbean Basin Initiative--as it is now construed--is substantially limited in its ability to meet the job requirements that lie ahead. This study estimates the 30-year costs of the three policy targets to range from $117 to $413 billion. On an average annual basis the range is between $4 billion and $14 billion. These expenditures are in terms of 1982 U.S. dollars. In 1984 the Reagan administration spent $881 million in aid to the Caribbean, more than double the 1980 amount of $336 million (Wall Street Journal, 1984). But even this higher amount falls substantially short of what is required. And the fact that more than half of the 1984 total went to Central American countries, whereas the greatest need for new jobs is in Mexico (which is excluded from the CBI) and the Caribbean Islands, further suggests that the CBI by itself will prove insufficient to meet the job creation requirements of the region. The conclusion that expanded efforts are called for is valid even if the costs are overestimated by as much as 100 percent.

Sixth, not all of the growing labor underutilization that we project may show up as higher open unemployment. If wage rates are flexible in a downward direction, then labor surpluses should exert downward pressure on wages, thereby helping to eliminate the surplus. It may be, as Preston (1986) has

reasoned, that "wages rather than unemployment statistics are where we would expect the consequences of population growth to appear [because] the poor can't afford to be unemployed" (p. 80). But lower wages for workers are equally likely to increase the stimulus for outmigration to destinations where economic opportunities appear brighter.[26]

What are the probable consequences for the Caribbean Basin and for the United States if these extra efforts toward job creation are not undertaken? The most immediate (and most likely) is that pressures resulting from unemployment and underemployment will intensify during the next 5 to 10 years. Among other things, the failure to take fuller advantage of existing human resources will mean a drag on potential economic growth rates in the region. Second, social and political unrest are likely to accelerate as heightened aspirations for a better way of life come into conflict with the economic reality of limited avenues for productive employment. Third, push factors related to undocumented migration from the Caribbean Basin to the United States are likely to strengthen. Moreover, due to projected substantial shortfalls in the United States in the supply of unskilled entry-level workers in many industrial categories beginning in the 1980s (Wachter, 1980), periods of peak pressure to emigrate in the Caribbean will coincide with the peak pressure to recruit foreign workers in the United States.

Following the enactment of IRCA, the number of border apprehensions by the U.S. Border Patrol dropped sharply. During most of 1986, monthly

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[26]Both higher unemployment and lower wages in the Caribbean Basin are likely to lead to greater migration to the United States. But as David Bloom, in a personal communication, has pointed out, "The migratory response may differ considerably depending on whether the price or the quantity side of the market takes the brunt of the shock. Thus, labor market institutions will be an important element conditioning future developments."

apprehensions averaged about 150,000, having risen in the first half of the year and then tapered off during the second half. But in November they dropped to 80,000, and they fell again to less than 60,000 during December.[27] Instead of remaining low, however, the monthly apprehension figures have followed roughly the same seasonal pattern since the beginning of 1987 that they exhibited in 1985 and 1986. Thus, the decline in apprehensions toward the end of 1986 may more accurately reflect a seasonal decline in the demand for farmworkers in California and in other major agricultural states than it does the impact of IRCA itself.[28] Unless greater efforts are made to deal with the expanding incentives originating in the Caribbean Basin for undocumented migration to the United States, one cannot be overly optimistic that reliance on employer sanctions and stepped-up enforcement activities along the U.S.-Mexico border--the main tools in IRCA for controlling the flow of undocumented workers to this country--will have their intended effect.

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[27]These data were supplied in a personal communication by Michael Hoefer, Statistical Analysis Branch, U.S. Immigration and Naturalization Service.

[28]Seasonal fluctuations in the number of undocumented farmworkers in California agriculture are discussed in Espenshade and Taylor (1988) and Taylor and Espenshade (forthcoming).

APPENDIX TABLES

TABLE A4. PROJECTED LABOR DEMAND (IN THOUSANDS): LOW GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980	48,714	9,311	12,266	6,424	20,713
1985	53,972	9,823	13,740	7,207	23,203
1990	59,831	10,363	15,392	8,085	25,991
1995	66,360	10,932	17,242	9,071	29,115
2000	73,638	11,533	19,314	10,176	32,615
2005	81,753	12,167	21,635	11,416	36,535
2010	90,805	12,835	24,236	12,808	40,926

TABLE A5. PROJECTED LABOR DEMAND (IN THOUSANDS): MEDIUM GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980	48,714	9,311	12,266	6,424	20,713
1985	55,058	9,941	14,032	7,378	23,707
1990	62,274	10,614	16,052	8,474	27,133
1995	70,484	11,333	18,363	9,733	31,055
2000	79,829	12,100	21,006	11,179	35,544
2005	90,470	12,919	24,031	12,840	40,681
2010	102,592	13,793	27,490	14,747	46,561

TABLE A6. PROJECTED LABOR DEMAND (IN THOUSANDS): HIGH GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980	48,714	9,311	12,266	6,424	20,713
1985	58,002	10,477	14,452	7,404	25,668
1990	69,160	11,789	17,028	8,534	31,809
1995	82,583	13,266	20,062	9,836	39,420
2000	98,752	14,927	23,637	11,337	48,850
2005	118,251	16,797	27,850	13,066	60,537
2010	141,794	18,901	32,813	15,060	75,021

TABLE A7. PROJECTED UNEMPLOYMENT RATES (IN PERCENT): LOW GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980	8.8	14.5	8.0	7.4	6.9
1985	12.9	20.1	11.5	11.1	11.0
1990	16.4	25.0	13.4	15.1	14.7
2000	20.9	31.1	15.2	22.8	19.4
2010	22.4	35.2	14.3	28.3	19.8

TABLE A8. PROJECTED UNEMPLOYMENT RATES (IN PERCENT): MEDIUM GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980	8.8	14.5	8.0	7.4	6.9
1985	11.2	19.1	9.6	9.0	9.1
1990	13.0	23.2	9.7	11.0	11.0
2000	14.3	27.7	7.7	15.2	12.1
2010	12.3	30.4	2.7	17.5	8.7

TABLE A9. PROJECTED UNEMPLOYMENT RATES (IN PERCENT): HIGH GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980	8.8	14.5	8.0	7.4	6.9
1985	6.4	14.7	6.9	8.7	1.6
1990	3.4	14.7	4.2	10.4	-4.3
2000	-6.0	10.8	-3.8	14.0	-20.8
2010	-21.2	4.6	-16.1	15.7	-47.1

TABLE A10. PROJECTED LABOR SURPLUS (IN THOUSANDS): LOW GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980	4,694	1,579	1,067	513	1,535
1985	8,021	2,464	1,780	899	2,877
1990	11,761	3,450	2,380	1,435	4,496
2000	19,496	5,199	3,457	3,013	7,827
2010	26,163	6,982	4,028	5,065	10,088

TABLE A11. PROJECTED LABOR SURPLUS (IN THOUSANDS): MEDIUM GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980	4,694	1,579	1,067	513	1,535
1985	6,935	2,346	1,488	728	2,373
1990	9,318	3,199	1,720	1,046	3,354
2000	13,305	4,632	1,765	2,010	4,898
2010	14,376	6,024	774	3,126	4,453

TABLE A12. PROJECTED LABOR SURPLUS (IN THOUSANDS): HIGH GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980	4694	1579	1067	513	1535
1985	3991	1810	1068	702	412
1990	2432	2024	744	986	-1322
2000	-5617	1805	-866	1852	-8408
2010	-24826	916	-4549	2813	-24007

TABLE A13. PROJECTED NUMBER OF ADDITIONAL JOBS (IN THOUSANDS) NEEDED TO PREVENT THE VOLUME OF UNEMPLOYMENT FROM RISING ABOVE ITS 1980 LEVEL IN ANY OF THE FOUR REGIONS: MEDIUM GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980-1990	4,624	1,620	653	533	1,819
1980-1985	2,241	767	421	215	838
1985-1990	2,383	853	232	318	980
1990-2000	3,987	1,433	44	964	1,545
2000-2010	2,507	1,391	0	1,116	0
TOTAL	11,118	4,445	698	2,613	3,363

TABLE A14. ESTIMATED COST OF CREATING THE EXTRA JOBS IN TABLE A13 (BILLIONS OF 1982 U.S. DOLLARS): MEDIUM GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980-1990	195.3	57.5	39.1	10.2	88.5
1980-1985	97.3	27.2	25.2	4.1	40.8
1985-1990	98.0	30.3	13.9	6.1	47.7
1990-2000	147.2	50.9	2.7	18.4	75.2
2000-2010	70.7	49.4	0.0	21.3	0.0
TOTAL	413.2	157.9	41.7	49.9	163.7

TABLE A15. PROJECTED NUMBER OF ADDITIONAL JOBS (IN THOUSANDS) NEEDED TO PREVENT UNEMPLOYMENT RATES FROM RISING ABOVE THEIR 1980 LEVELS IN ANY OF THE FOUR REGIONS: MEDIUM GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980-1990	3,086	1,196	298	342	1,250
1980-1985	1,512	564	246	128	574
1985-1990	1,573	632	52	213	676
1990-2000	2,561	1,010	0	693	858
2000-2010	1,714	944	0	770	0
TOTAL	7,360	3,150	298	1,804	2,108

TABLE A16. ESTIMATED COST OF CREATING THE EXTRA JOBS IN TABLE A15 (BILLIONS OF 1982 U.S. DOLLARS): MEDIUM GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980-1990	127.7	42.5	17.8	6.5	60.8
1980-1985	65.1	20.0	14.7	2.4	27.9
1985-1990	62.5	22.4	3.1	4.1	32.9
1990-2000	90.9	35.9	0.0	13.2	41.7
2000-2010	48.2	33.5	0.0	14.7	0.0
TOTAL	266.8	111.9	17.8	34.5	102.6

TABLE A17. PROJECTED NUMBER OF ADDITIONAL JOBS (IN THOUSANDS) NEEDED TO PREVENT UNEMPLOYMENT RATES FROM EXCEEDING 150 PERCENT OF THEIR 1980 LEVELS IN ANY OF THE FOUR REGIONS: MEDIUM GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980-1990	393	195	0	0	199
1980-1985	0	0	0	0	0
1985-1990	393	195	0	0	199
1990-2000	1,858	798	0	546	514
2000-2010	1,316	720	0	596	0
TOTAL	3,568	1,714	0	1,142	712

TABLE A18. ESTIMATED COST OF CREATING THE EXTRA JOBS IN TABLE A17 (BILLIONS OF 1982 U.S. DOLLARS): MEDIUM GROWTH

YEAR	TOTAL	CARIBBEAN ISLANDS	SOUTHERN RIM	CENTRAL AMERICA	MEXICO
1980-1990	16.6	6.9	0.0	0.0	9.7
1980-1985	0.0	0.0	0.0	0.0	0.0
1985-1990	16.6	6.9	0.0	0.0	9.7
1990-2000	63.8	28.4	0.0	10.4	25.0
2000-2010	37.0	25.6	0.0	11.4	0.0
TOTAL	117.3	60.9	0.0	21.8	34.7

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